

atgatgatgc catttaaacg acaggctcta gtggaatttg aaaacataga tagtgccaaa
360
gaatgtgtga catttgctgc agatgaaccc gtgtacattg ctggtcaaca ggcttttttc
420
aactattcta caagcaaaag gatcactcgg ccaggaaata ctgatgatcc atcaggagggc
480
aacaagttc ttctgctctc aattcagaat ccgctttatc caattacagt ggatgtttta
540
tatactgtat gcaacctgtg tggcaaagtg caacgtattg ttatattcaa gagaaatggg
600
atacaagcaa tggttgagtt tgaatcagtc ctttgtgccc agaaaagctaa agcagcactc
660
aatggagctg atatatatgc tggatgttgc acactaaaaa ttgaatatgc acggccaact
720
cgtctaaaatg ttattaggaa tgacaatgac agttgggact acactaaacc atatttgga
780
agacgagata gaggaaaggg tcgccagaga caagccattt tgggagaaca cccttcttcg
840
tttagacatg atggctatgg atcccatggg ccattattgc ctttaccag tcgttacaga
900
atgggctctc gagatacacc tgaacttggt gcttatccat taccacaggc ttcttcctct
960
tacatgcacg gaggaaatcc ctctgggttca gttgtaatgg ttagtggatt acatcaacta
1020
aaaatgaatt gttcaagagt cttcaacctg ttctgcttat atggaaatat tgagaaggta
1080
aaatttatga agaccattcc tggtagagca ctggtagaaa tgggtgatga gtatgctgta
1140
gaaagagctg tcacacacct taataatgtc aaattatttg ggaaaagact taatgtttgc
1200
gtgtctaaac aacattcagt tgttccaagt caaatatttg agctggagga tggtagcagc
1260
agctacaaag attttgcaat gagcaaaaat aatcgcttta caagtgtggt ccaagcatct
1320
aagaatataa tccagccacc ctctgtgtt ttgcattatt ataatgttcc attgtgtgtc
1380
acagaagaga ccttcacaaa gttgtgtaat gaccatgaag ttcttacatt catcaaatat
1440
aaagtgtttg atgcaaaacc ttcagccaaa acactttctg ggctattaga atgggagtg
1500
aaaactgatg cagtagaagc ccttacggca ctgaatcact atcagataag agtgccgaat
1560
ggttccaatc cctatacatt gaagctttgc ttttctacat catccccatt ataagaagag
1620
aagagcatgt tagaatttat gttcaccttt attacaattt caaagctaca cttcattaaa
1680
aaaaaatcta aaatggttga tctcatgttg ctttgcttac ttaagatcc tgttctgtaa
1740
taaacatatt ttgccttgag taaatttggt gtaagcttaa aaaaaaaaaa a
1791

<210> 3314

<211> 537

<212> PRT

<213> Homo sapiens

<400> 3314

Xaa Leu Gly Arg Arg Thr Arg Arg Thr Gly Ser Thr Arg Ala Arg Pro
 1 5 10 15
 Ser Val Ser Arg Pro Arg Arg Gly Arg Ser Thr Thr Arg Pro Arg Lys
 20 25 30
 Ala Arg Thr Ala Val Lys Arg Arg Pro Gly Ala Gly Arg Val Gly Gly
 35 40 45
 Gly Gly Gly Arg Xaa Arg Ser Arg Gln Pro Glu Gly Leu Arg Ser His
 50 55 60
 His Lys Val Ser Val Ser Pro Val Val His Val Arg Gly Leu Cys Glu
 65 70 75 80
 Ser Val Val Glu Ala Asp Leu Val Glu Ala Leu Glu Lys Phe Gly Thr
 85 90 95
 Ile Cys Tyr Val Met Met Met Pro Phe Lys Arg Gln Ala Leu Val Glu
 100 105 110
 Phe Glu Asn Ile Asp Ser Ala Lys Glu Cys Val Thr Phe Ala Ala Asp
 115 120 125
 Glu Pro Val Tyr Ile Ala Gly Gln Gln Ala Phe Phe Asn Tyr Ser Thr
 130 135 140
 Ser Lys Arg Ile Thr Arg Pro Gly Asn Thr Asp Asp Pro Ser Gly Gly
 145 150 155 160
 Asn Lys Val Leu Leu Leu Ser Ile Gln Asn Pro Leu Tyr Pro Ile Thr
 165 170 175
 Val Asp Val Leu Tyr Thr Val Cys Asn Pro Val Gly Lys Val Gln Arg
 180 185 190
 Ile Val Ile Phe Lys Arg Asn Gly Ile Gln Ala Met Val Glu Phe Glu
 195 200 205
 Ser Val Leu Cys Ala Gln Lys Ala Lys Ala Ala Leu Asn Gly Ala Asp
 210 215 220
 Ile Tyr Ala Gly Cys Cys Thr Leu Lys Ile Glu Tyr Ala Arg Pro Thr
 225 230 235 240
 Arg Leu Asn Val Ile Arg Asn Asp Asn Asp Ser Trp Asp Tyr Thr Lys
 245 250 255
 Pro Tyr Leu Gly Arg Arg Asp Arg Gly Lys Gly Arg Gln Arg Gln Ala
 260 265 270
 Ile Leu Gly Glu His Pro Ser Ser Phe Arg His Asp Gly Tyr Gly Ser
 275 280 285
 His Gly Pro Leu Leu Pro Leu Pro Ser Arg Tyr Arg Met Gly Ser Arg
 290 295 300
 Asp Thr Pro Glu Leu Val Ala Tyr Pro Leu Pro Gln Ala Ser Ser Ser
 305 310 315 320
 Tyr Met His Gly Gly Asn Pro Ser Gly Ser Val Val Met Val Ser Gly
 325 330 335
 Leu His Gln Leu Lys Met Asn Cys Ser Arg Val Phe Asn Leu Phe Cys
 340 345 350
 Leu Tyr Gly Asn Ile Glu Lys Val Lys Phe Met Lys Thr Ile Pro Gly
 355 360 365
 Thr Ala Leu Val Glu Met Gly Asp Glu Tyr Ala Val Glu Arg Ala Val
 370 375 380
 Thr His Leu Asn Asn Val Lys Leu Phe Gly Lys Arg Leu Asn Val Cys
 385 390 395 400
 Val Ser Lys Gln His Ser Val Val Pro Ser Gln Ile Phe Glu Leu Glu

```
<210> 3315
<211> 934
<212> DNA
<213> Homo sapiens
```

```

<400> 3315
ngggcgggcgg catggcagca tcttcctga cggtcacctt agggcgggctg gcgctccgcgt
60
gcagccacag catcctgaga ccttcggggc cgggagcagc ctcccttttg tctgcttctc
120
gaaggttcaa ttcacagagc acttcatatc taccagggta atatcaaaat atatgttcc
180
aaaacatccc tgagttcacc accttggcca gaagttgttc tgccagaccc agttgaggag
240
accagacacc atgcagaggt cgtgaagaag gtgaatgaga tgatcgtcac ggggcagtat
300
ggcaggctct ttgccgtggt gcactttgcc agccgccagt ggaagggtgac ctctgaagac
360
ctgatcttaa ttggaaatga actagacctt gcgtgtggag agagaattcg actggagaag
420
gtcctgctgg ttggggcaga caacttcacg ctgcttggca agccactcct cggaaaggat
480
cttgctcgag tagaagccac agtcattgaa aagacagaat catggccaag aatcattatg
540
agattcagga aaaggaaaaa cttcaagaag aaaagaatcg tcacgacccc gcagactgtc
600
ctccggataa acagcattga gattgctccg tgtttgttgt gattaccgag ttaatactta
660
caaaaggata aaaataaact cctgcttccc aaggagacca ggtttctgtg ttctggttta
720
aagccgtgca tgccgttgtt agatagttta actggagcag catgtctgta agcaccaggc
780
ccccgagcca gagaaaacag gaactggggg agaatgacaa gcatggccct ccaggggctg
840
gataaatagt attcttggca gccctccacc ccatgtggcg gcggcagggc ccaggggagt
900

```

ggggcgggga tgcagattga tcttgagct gcag
934

<210> 3316
<211> 187
<212> PRT
<213> Homo sapiens

<400> 3316
Asp Leu Arg Gly Pro Glu Gln Pro Pro Phe Gly Leu Leu Leu Glu Gly
1 5 10 15
Ser Ile His Arg Ala Leu His Ile Tyr Gln Gly Asn Ile Lys Ile Tyr
20 25 30
Val Pro Lys Thr Ser Leu Ser Ser Pro Pro Trp Pro Glu Val Val Leu
35 40 45
Pro Asp Pro Val Glu Glu Thr Arg His His Ala Glu Val Val Lys Lys
50 55 60
Val Asn Glu Met Ile Val Thr Gly Gln Tyr Gly Arg Leu Phe Ala Val
65 70 75 80
Val His Phe Ala Ser Arg Gln Trp Lys Val Thr Ser Glu Asp Leu Ile
85 90 95
Leu Ile Gly Asn Glu Leu Asp Leu Ala Cys Gly Glu Arg Ile Arg Leu
100 105 110
Glu Lys Val Leu Leu Val Gly Ala Asp Asn Phe Thr Leu Leu Gly Lys
115 120 125
Pro Leu Leu Gly Lys Asp Leu Val Arg Val Glu Ala Thr Val Ile Glu
130 135 140
Lys Thr Glu Ser Trp Pro Arg Ile Ile Met Arg Phe Arg Lys Arg Lys
145 150 155 160
Asn Phe Lys Lys Lys Arg Ile Val Thr Thr Pro Gln Thr Val Leu Arg
165 170 175
Ile Asn Ser Ile Glu Ile Ala Pro Cys Leu Leu
180 185

<210> 3317
<211> 1665
<212> DNA
<213> Homo sapiens

<400> 3317
ntcattatatt tccgaaatga atgtagtaga atttcagaat ggcttctgga acatgtttcc
60
tggtaaaagg cctagaatat cctgcagtgg tagagtttgc tccattccag aagatagcca
120
aaaagaagct gagaaaaaaa gatgccaaga ctggaagcat cgaagatggt gagccctttc
180
caagtgtctac gttatgaagc tgccaaatta agaacactga gcaaagttaa ttctcccgt
240
gttgggaaag attatattta ttttcttctt actttttaat gtctagatcc agaataaag
300
aagtttttag aaacctactg tgtggaggaa gagaagacca gtgccaaccc tgagactctg
360
ctgggggaga tggaggcgaa gacaagagag ctcattgcta gaagaaccac acctcttttg
420

gaatatatta aaaatagaaa attagaaaag cagagaattc gagaagagaa gcgagaagaa
 480
 cggaggagga gagagttaga aaagaaacgt ttgcgggaag aggaaaaaag aagaagaaga
 540
 gaagaagaaa gatgcaaaaa aaaagagaca gataaacaga agaaaattgc agagaaagaa
 600
 gtaaggatta agcttcttaa gaaaccagaa aaggagagag aaccaaccac agagaaacca
 660
 aaagaaagag gagaggagat tgatactgga ggtggcaagc aggaatcctg tgcccccggt
 720
 gcagtcgtaa aagccaggcc catggaaggc tcgctggagg agccccagga gacgtcacac
 780
 agcggcagtg ataaagagca cagggatgtg gagagatctc aagaacaaga atctgaagca
 840
 caaagatacc atgtggatga cggcaggagg cacagagctc accacgagcc tgaacggctt
 900
 tccagaagga gtgaggatga gcagagatgg gggaaaggac ctggccaaga cagaggggaag
 960
 aaggggagcc aggacagcgg ggctccgggg gaggccatgg agagactggg aagagcgcag
 1020
 aggtgtgacg acagtccagc acccagaaaa gagcgactgg caaacaaggt ttttattaaa
 1080
 cccaaaaaga aaaatgtgtc tggctgtctt aaggctcagg ctgcatgctg accatgtcac
 1140
 cccacttgg ccttgtgtct tggggaacgc agtgctttga gcattttcaa gagcagtttt
 1200
 tcctgaaagt cagatcccag agtgagacta gtcacatct tttctcagat aatcaaatta
 1260
 tttttacca ggaaaaagaa agattttatt tagtataaaa ctagcacgtt tatatgatcc
 1320
 acttgagaat aagattatta aatttaccct tgagacagga aggaaagttt taatgatatt
 1380
 tcatggaggt ttcttcaca ttattaacaa cattctgatt attggtgaat attcccatgg
 1440
 ctcacaaaca cctgtaagtt agatctgcac ggacggtgag cacaggactg tggttacccc
 1500
 cttagccaag caaacaactt ttttttttca ggagctaatt tttgttcagg ttgcattttc
 1560
 ccagcgcagc actacagatg gcatcacctt tctgacagca ccaggcccca ccctggcctc
 1620
 ctagcaaact gagggctgcc tagggttcca gttccactc acctc
 1665

<210> 3318

<211> 253

<212> PRT

<213> Homo sapiens

<400> 3318

Met	Glu	Ala	Lys	Thr	Arg	Glu	Leu	Ile	Ala	Arg	Arg	Thr	Thr	Pro	Leu
1				5					10					15	
Leu	Glu	Tyr	Ile	Lys	Asn	Arg	Lys	Leu	Glu	Lys	Gln	Arg	Ile	Arg	Glu
			20					25				30			
Glu	Lys	Arg	Glu	Glu	Arg	Arg	Arg	Arg	Glu	Leu	Glu	Lys	Lys	Arg	Leu

35 40 45
 Arg Glu Glu Lys Arg Arg Arg Glu Glu Glu Arg Cys Lys Lys
 50 55 60
 Lys Glu Thr Asp Lys Gln Lys Lys Ile Ala Glu Lys Glu Val Arg Ile
 65 70 75 80
 Lys Leu Leu Lys Lys Pro Glu Lys Gly Glu Glu Pro Thr Thr Glu Lys
 85 90 95
 Pro Lys Glu Arg Gly Glu Glu Ile Asp Thr Gly Gly Gly Lys Gln Glu
 100 105 110
 Ser Cys Ala Pro Gly Ala Val Val Lys Ala Arg Pro Met Glu Gly Ser
 115 120 125
 Leu Glu Glu Pro Gln Glu Thr Ser His Ser Gly Ser Asp Lys Glu His
 130 135 140
 Arg Asp Val Glu Arg Ser Gln Glu Gln Glu Ser Glu Ala Gln Arg Tyr
 145 150 155 160
 His Val Asp Asp Gly Arg Arg His Arg Ala His His Glu Pro Glu Arg
 165 170 175
 Leu Ser Arg Arg Ser Glu Asp Glu Gln Arg Trp Gly Lys Gly Pro Gly
 180 185 190
 Gln Asp Arg Gly Lys Lys Gly Ser Gln Asp Ser Gly Ala Pro Gly Glu
 195 200 205
 Ala Met Glu Arg Leu Gly Arg Ala Gln Arg Cys Asp Asp Ser Pro Ala
 210 215 220
 Pro Arg Lys Glu Arg Leu Ala Asn Lys Val Phe Ile Lys Pro Lys Lys
 225 230 235 240
 Lys Asn Val Ser Gly Cys Leu Lys Val Gln Ala Ala Cys
 245 250

<210> 3319

<211> 1541

<212> DNA

<213> Homo sapiens

<400> 3319

nncggccgcg gggcgcgccc gctcccaagt cggcttcctc cccgcccggg ccgctttgcc
 60
 tcgggtctcc ccattctcca ggtcccttga actgcacagt cggaggccgt gggcggcggg
 120
 ctctgcctcc gccgaggga acgcggatcg cccctctgct tcccgaact gccctgatca
 180
 cccccgtcc cagcccttga gtgaacgtcc ttctgagcgg ctctctgggg tctcccccac
 240
 gtcccaaagg ccggcaagat ggtgtcctgg atgatctgtc gcctggtggt gctggtgttt
 300
 gggatgctgt gtccagetta tgcttcctat aaggctgtga agaccaagaa cattcgtgaa
 360
 tatgtgcggt ggatgatgta ctggattgtt ttgcaactct tcatggcagc agagatcgtt
 420
 acagacattt ttatctcttg gttccctttc tactatgaga tcaagatggc ctctgtgctg
 480
 tggctgctct caccctacac caagggcgcc agcctgcttt accgcaagtt tgtccaccgc
 540
 tcctgtccc gccatgagaa ggagatcgac gcgtacatcg tgcaggccaa ggagcgcagc
 600

tacgagaccg tgctcagctt cgggaagcgg ggcctcaaca ttgccgcctc cgctgctgtg
 660
 caggctgccca ccaagagtca gggggcgctg gccggcaggc tgcggagctt ctccatgcag
 720
 gacctgcgt ccattctctga cgcacctgcc cctgcctacc atgaccccct ctacctggag
 780
 gaccaggtgt cccaccggag gccaccatt gggtagcggg ccgggggcct gcaggacagc
 840
 gacaccgagg atgagtgttg gtcagatact gaggcagtcc cccgggcgcc agcccggccc
 900
 cgagagaagc ccctaaccg cagccagagc ctgcgtgtgg tcaagaggaa gccaccggtg
 960
 cgggagggca cctcgcgctc cctgaagggt cggacgagga aaaagactgt gccctcagac
 1020
 gtggacagct agggctctgt gcatctgccc ccttcttacc tcgtgccctg cagggctcca
 1080
 gggctatattg gagggacctt gggctgcaca tctggcctgc ctgcaccagc tgacctggcc
 1140
 ccacctctct gactcctgct gatgggttaag ggccgggagc agatgctgcc aaggccacat
 1200
 gcagggatgc acccacaatg taccaaagca ggctggggccc agggttctat ttattgcctt
 1260
 gctctgcctt ctccttccc cggttgtggg acaagagccc tccctgaacc cctgcaaccc
 1320
 tccctgaacc cctgcaaagt aaaccaaagc tccacctggg tgtgttcatt ccttctgtc
 1380
 cttcaaagta cttgatagcc tttcataagg cctggcacat gtgtcctggt tgtgtgtgtg
 1440
 tgtgttggtg agtgaggtca ggtttgcgag tgttttgata aataaatata taaaggggca
 1500
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
 1541

<210> 3320

<211> 256

<212> PRT

<213> Homo sapiens

<400> 3320

Val	Ser	Trp	Met	Ile	Cys	Arg	Leu	Val	Val	Leu	Val	Phe	Gly	Met	Leu
1				5				10						15	
Cys	Pro	Ala	Tyr	Ala	Ser	Tyr	Lys	Ala	Val	Lys	Thr	Lys	Asn	Ile	Arg
			20					25					30		
Glu	Tyr	Val	Arg	Trp	Met	Met	Tyr	Trp	Ile	Val	Phe	Ala	Leu	Phe	Met
		35					40					45			
Ala	Ala	Glu	Ile	Val	Thr	Asp	Ile	Phe	Ile	Ser	Trp	Phe	Pro	Phe	Tyr
		50				55				60					
Tyr	Glu	Ile	Lys	Met	Ala	Phe	Val	Leu	Trp	Leu	Leu	Ser	Pro	Tyr	Thr
65				70				75				80			
Lys	Gly	Ala	Ser	Leu	Leu	Tyr	Arg	Lys	Phe	Val	His	Pro	Ser	Leu	Ser
			85					90				95			
Arg	His	Glu	Lys	Glu	Ile	Asp	Ala	Tyr	Ile	Val	Gln	Ala	Lys	Glu	Arg
		100					105					110			
Ser	Tyr	Glu	Thr	Val	Leu	Ser	Phe	Gly	Lys	Arg	Gly	Leu	Asn	Ile	Ala

115	120	125
Ala Ser Ala Ala Val Gln Ala Ala Thr Lys Ser Gln Gly Ala Leu Ala		
130	135	140
Gly Arg Leu Arg Ser Phe Ser Met Gln Asp Leu Arg Ser Ile Ser Asp		
145	150	155
Ala Pro Ala Pro Ala Tyr His Asp Pro Leu Tyr Leu Glu Asp Gln Val		
165	170	175
Ser His Arg Arg Pro Pro Ile Gly Tyr Arg Ala Gly Gly Leu Gln Asp		
180	185	190
Ser Asp Thr Glu Asp Glu Cys Trp Ser Asp Thr Glu Ala Val Pro Arg		
195	200	205
Ala Pro Ala Arg Pro Arg Glu Lys Pro Leu Ile Arg Ser Gln Ser Leu		
210	215	220
Arg Val Val Lys Arg Lys Pro Pro Val Arg Glu Gly Thr Ser Arg Ser		
225	230	235
Leu Lys Val Arg Thr Arg Lys Lys Thr Val Pro Ser Asp Val Asp Ser		
245	250	255

<210> 3321

<211> 1536

<212> DNA

<213> Homo sapiens

<400> 3321

```

nnacgcgtcg tagacgttgg ggagcgggaa ggcaacggca gcgggatcgg gatgaacagc
60
ggcggcggct tcggtttggg cttaggcttc ggcctcacc ccacgtcggg gattcagggtg
120
acgaatctgt cgtcggcggt gaccagcgag cagatgcgga cgcttttttc cttcctagga
180
gaaatcgagg agctgcggct ctaccccccg gacaacgcac ctcttgcttt ttcctccaaa
240
gtatgttatg ttaagtttcg tgatccatca agtggtggcg tggcccagca tctaactaac
300
acggttttta ttgacagagc tctgatagtt gttccttggt cagaaggtaa aatcccagag
360
gaatccaaag ccctctcttt attggctcct gctccaacca tgacaagtct gatgcctggt
420
gcaggattgc ttccaatacc gaccccaaat cctttgacta ctcttggtgt ttcacttagc
480
agtttgggag ctataccagc agcagcacta gacccaaca ttgcaacact tggagagata
540
ccacagccac cacttatggg aaacgtggat ccttccaaaa tagatgaaat taggagaacg
600
gtttatgttg gaaatctgaa ttcccagaca acgacagctg atcaactact tgaatttttt
660
aaacaagttg gagaagtga gtttgcggtat ggcagaataa atcactccaa caatgcaata
720
gtaaaacccc ctgagatgac acctcaggct gcagctaagg agttagaaga agtaatgaag
780
cgagtacgag aagctcagtc atttatctca gcagctattg aaccagagtc tggaaagagc
840
aatgaaagaa aaggcggctg atctcgttcc catactcgct caaaatccag gtctagctca
900

```

aaatcccatt ctagaaggaa aagatcacaa tcaaaacaca ggagtagatc ccataataga
 960
 tcacgttcaa gacagaaaga cagacgtaga tctaagagcc cacataaaaa acgctctaaa
 1020
 tcaagggaga gacggaagtc aaggagtcgt tcgcattcac gggacaagag aaaagacact
 1080
 cgagaaaaga tcaaggaaaa ggaaagagtg aaagagaaaag acagggaaaa ggagagagag
 1140
 agggaaaagg aacgtgaaaa agaaaaggaa cggggtaaaa acaaagaccg ggacaaggaa
 1200
 cgggaaaagg accgggaaaa agacaaggaa aaggacagag agagagaacg ggaaaaagag
 1260
 catgagaagg atcgagacaa agagaaggaa aaggaacagg acaaagaaaa ggaacgagaa
 1320
 aaagacagat ccaaagagat agatgaaaaa aagaaagaag gataaaaaat ccagaacacc
 1380
 acccaggagt tacaatgagt cgcaagatc tcgtagttcc agcagggaaa ggcgtaggag
 1440
 gaggagcagg agttcttcca gatcgccaag aacatcaaaa accataaaaa ggaaatcttc
 1500
 tagatctccg tccccagga gaaataagaa ggataa
 1536

<210> 3322

<211> 454

<212> PRT

<213> Homo sapiens

<400> 3322

Xaa	Arg	Val	Val	Asp	Val	Gly	Glu	Arg	Glu	Gly	Asn	Gly	Ser	Gly	Ile
1				5					10					15	
Gly	Met	Asn	Ser	Gly	Gly	Gly	Phe	Gly	Leu	Gly	Leu	Gly	Phe	Gly	Leu
			20					25					30		
Thr	Pro	Thr	Ser	Val	Ile	Gln	Val	Thr	Asn	Leu	Ser	Ser	Ala	Val	Thr
			35				40						45		
Ser	Glu	Gln	Met	Arg	Thr	Leu	Phe	Ser	Phe	Leu	Gly	Glu	Ile	Glu	Glu
	50					55				60					
Leu	Arg	Leu	Tyr	Pro	Pro	Asp	Asn	Ala	Pro	Leu	Ala	Phe	Ser	Ser	Lys
65					70					75				80	
Val	Cys	Tyr	Val	Lys	Phe	Arg	Asp	Pro	Ser	Ser	Val	Gly	Val	Ala	Gln
				85					90					95	
His	Leu	Thr	Asn	Thr	Val	Phe	Ile	Asp	Arg	Ala	Leu	Ile	Val	Val	Pro
			100					105					110		
Cys	Ala	Glu	Gly	Lys	Ile	Pro	Glu	Glu	Ser	Lys	Ala	Leu	Ser	Leu	Leu
	115						120					125			
Ala	Pro	Ala	Pro	Thr	Met	Thr	Ser	Leu	Met	Pro	Gly	Ala	Gly	Leu	Leu
	130					135					140				
Pro	Ile	Pro	Thr	Pro	Asn	Pro	Leu	Thr	Thr	Leu	Gly	Val	Ser	Leu	Ser
145					150					155				160	
Ser	Leu	Gly	Ala	Ile	Pro	Ala	Ala	Ala	Leu	Asp	Pro	Asn	Ile	Ala	Thr
				165					170					175	
Leu	Gly	Glu	Ile	Pro	Gln	Pro	Pro	Leu	Met	Gly	Asn	Val	Asp	Pro	Ser
			180					185					190		
Lys	Ile	Asp	Glu	Ile	Arg	Arg	Thr	Val	Tyr	Val	Gly	Asn	Leu	Asn	Ser

195	200	205
Gln Thr Thr Thr Ala Asp Gln Leu Leu Glu Phe Phe Lys Gln Val Gly		
210	215	220
Glu Val Lys Phe Ala Asp Gly Arg Ile Asn His Ser Asn Asn Ala Ile		
225	230	235
Val Lys Pro Pro Glu Met Thr Pro Gln Ala Ala Ala Lys Glu Leu Glu		
245	250	255
Glu Val Met Lys Arg Val Arg Glu Ala Gln Ser Phe Ile Ser Ala Ala		
260	265	270
Ile Glu Pro Glu Ser Gly Lys Ser Asn Glu Arg Lys Gly Gly Arg Ser		
275	280	285
Arg Ser His Thr Arg Ser Lys Ser Arg Ser Ser Ser Lys Ser His Ser		
290	295	300
Arg Arg Lys Arg Ser Gln Ser Lys His Arg Ser Arg Ser His Asn Arg		
305	310	315
Ser Arg Ser Arg Gln Lys Asp Arg Arg Arg Ser Lys Ser Pro His Lys		
325	330	335
Lys Arg Ser Lys Ser Arg Glu Arg Arg Lys Ser Arg Ser Arg Ser His		
340	345	350
Ser Arg Asp Lys Arg Lys Asp Thr Arg Glu Lys Ile Lys Glu Lys Glu		
355	360	365
Arg Val Lys Glu Lys Asp Arg Glu Lys Glu Arg Glu Arg Glu Lys Glu		
370	375	380
Arg Glu Lys Glu Lys Glu Arg Gly Lys Asn Lys Asp Arg Asp Lys Glu		
385	390	395
Arg Glu Lys Asp Arg Glu Lys Asp Lys Glu Lys Asp Arg Glu Arg Glu		
405	410	415
Arg Glu Lys Glu His Glu Lys Asp Arg Asp Lys Glu Lys Glu Lys Glu		
420	425	430
Gln Asp Lys Glu Lys Glu Arg Glu Lys Asp Arg Ser Lys Glu Ile Asp		
435	440	445
Glu Lys Lys Lys Glu Gly		
450		

<210> 3323

<211> 949

<212> DNA

<213> Homo sapiens

<400> 3323

```

ntcatgattc ttcactagaa gtttgtgatt taaagatttg tgatgaagaa attccactat
60
gcaagtggca tggcttccca gttataaaat ctcagctctt gagagggcct cagagctaac
120
ttctacccca ggtactgtgc cttgcacaac ataaggcaag ccagcctctg actgaacatg
180
cctggaaagg agttcaatat cttacttaac atctctcagg aagatgtgcc atcttcaact
240
ggaccattgg cttctgagta agctgtgtta ggccctgggct agacctaatg gtttattatt
300
ggtggagaga aagatctgga aatacttgag gttattacat actagattag cttctaattg
360
gaaccatttt tcttttaaca gtgataaatt attatttccg aagttaactg ttcccttggg
420

```

cgtgatacac actcgattaa caaacatact gttgtatattt ttccagtttt gtttggctat
 480
 gccaccacag tcatccccag ggtctataca tactatgttt caactgtatt atttgcatt
 540
 tttggcatta gaatgcttcg ggaaggctta aagatgagcc ctgatgaggg tcaagaggaa
 600
 ctggaagaag ttcaagctga attaaagaag aaagatgaag aagtaagcca tggcactggt
 660
 gatctggacc aaaaaggcac tcaactagga ataaacactc tacagagggt tctcagtggc
 720
 cccatctgtg tgatatgctg ggctacacaa aaatagcttc ttttgccttg tctgttctt
 780
 atacctgtct gtgatctgac ttgggggttg tgtgaatgta gtagagaaag gaagctgaca
 840
 gatgaatact gaacacaggt aatcagtttc cttaattagg ttgattataa gctcctgaaa
 900
 agcaggaact gaattttata attttacctg ttttctccca tggagtctt
 949

<210> 3324

<211> 122

<212> PRT

<213> Homo sapiens

<400> 3324

Ile	Ile	Ile	Ser	Glu	Val	Asn	Cys	Ser	Leu	Gly	Arg	Asp	Thr	His	Ser
1			5					10					15		
Ile	Asn	Lys	His	Thr	Val	Val	Phe	Phe	Pro	Val	Leu	Phe	Gly	Tyr	Ala
	20						25					30			
Thr	Thr	Val	Ile	Pro	Arg	Val	Tyr	Thr	Tyr	Tyr	Val	Ser	Thr	Val	Leu
	35					40					45				
Phe	Ala	Ile	Phe	Gly	Ile	Arg	Met	Leu	Arg	Glu	Gly	Leu	Lys	Met	Ser
50					55					60					
Pro	Asp	Glu	Gly	Gln	Glu	Leu	Glu	Glu	Val	Gln	Ala	Glu	Leu	Lys	
65				70					75				80		
Lys	Lys	Asp	Glu	Glu	Val	Ser	His	Gly	Thr	Val	Asp	Leu	Asp	Gln	Lys
			85					90					95		
Gly	Thr	Gln	Leu	Gly	Ile	Asn	Thr	Leu	Gln	Arg	Phe	Leu	Ser	Gly	Pro
	100							105					110		
Ile	Cys	Val	Ile	Cys	Gly	Ala	Thr	Gln	Lys						
	115						120								

<210> 3325

<211> 5055

<212> DNA

<213> Homo sapiens

<400> 3325

agacagtccg ggagctgctg cggccgcgct gtctgcttct cctgcgcctc cttttcgccc
 60
 agcactagcg ccttaggccca gctcggggga tgtgagagcc gaagccctta gactggccag
 120
 gcacagagtc gggtcgggat ttgtcagcca agcctcggct ccagctccgc aatctcggga
 180

ctcaccgag cgaccaggc ccgacggcaa gttcgggagg gacggcgcc gccgcgct
240
caggctcagc ttcgctgccc gccagaaga tgaatcggc ctccgccc cctccgctcc
300
cgccgctgg gcagcaagt atccacgtca cgcaggacct agacacagac ctgaagccc
360
tcttcaactc tgtcatgaat ccgaagccta gctcgtggcg gaagaagatc ctgccggagt
420
ctttctttaa ggagcctgat tcgggctcgc actcgcgcca gtccagcacc gactcgtcgg
480
gcggccacca ggggcctcga ctggctgggg ggtgccagc atgtccgctc gactcgtcgg
540
cccgcgtccc tgcagctggg caccggcgcg ggtgctgagg gtagccccgc gcagcagcac
600
gcgcacctcc gccagcagtc ctacgacgtg accgacgagc tgccactgcc cccgggctgg
660
gagatgacct tcacggccac tggccagagg tacttctca atcacataga aaaaatcacc
720
acatggcaag accctaggaa ggcatgaat cagcctctga atcatatgaa cctccacct
780
gccgtcagtt ccacaccagt gcctcagagg tccatggcag tatccagcc aaatctcgtg
840
atgaatcacc aacaccagca gcagatggcc ccagtagcc tgagccagca gaaccgccc
900
actcagaacc caccgcagg gctcatgagt atgcccattg cgctgaccac tcagcagcag
960
cagcagcaga aactgcggct tcagagaatc cagatggaga gagaaaggat tcgaatgcgc
1020
caagaggagc tcagaggca ggaagctgcc ctctgtcagc agtcccat ggaagctgag
1080
actcttgccc cagttcaggc tgctgtcaac ccacccagc tgacccaga catgagatcc
1140
atcactaata atagctcaga tcctttctc aatggagggc catatcattc gaggagcag
1200
agcactgaca gtggcctggg gttagggtgc tacagtgtcc ccacaactcc ggaggacttc
1260
ctcagcaatg tggatgagat ggatacagga gaaaacgcag gacaaacacc catgaacatc
1320
aatccccaac agaccggtt ccctgatttc cttgactgtc ttccaggaac aaacgttgac
1380
ttaggaactt tggaatctga agacctgac cccctctca atgatgtaga gtctgctctg
1440
aacaaaagtg agccctttct aacctggctg taatcactac cattgtaact tggatgtagc
1500
catgacctta ctttctctgg gcctcttgga aaaagtgatg gagcagagca agtctgcagg
1560
tgcaccaact cccgcctcca tgaactgtgc tccctcctt ttatgttgcc agtttaatca
1620
ttgcctgggt ttgattgaga gtaacttaag ttaaataaa ataaatatc tattttcatt
1680
ttctgcaagc ctgcgttctt gtgacagatt atacagaatt gtgtctgcag gattgattat
1740
gcagaatact tttctcttct ttctctgctg ccccatggct aagctttatg ggtgttaatt
1800

gaaatttata caccaattga ttttaaacca taaaaagctg accacaggca gttacttctg
1860
agggcatctt ggtccaggaa atgtgcacaa aattcgacct gatttacagt ttcaaaaact
1920
gtattgatga cagtagtacc aaatgcttta aaaactatth aacttgagct ttaaaaatca
1980
ttgtatggat agtaaaattc tactgtatgg aatacaatgt aattttgaat ccatgctggc
2040
tctgatggct cttattagtc tgtatttata aaggcacaca gtcctattgt agcttatctt
2100
tcgttattht actgcagagc atctagacaa cttagtcctt ccagcgggaa agtagcagca
2160
gcagcattag tcacagttct tacactacag atcttgtgaa agagaccagt ttggtactaa
2220
ttatgagcat tttattcaaa caaaagtht tgaatatata caactgggga tttaaaaaat
2280
tgcagcttag aatctgatgg thtthttht thtcttgatgt tgtttgtttg tttttgagat
2340
cgagthttht tcttgtttgc caggctggaa tgcaatggca caatctcggc tcaactgcaac
2400
ctctgccttc tgggttcaag cgattctctt gccttagcct cccgagtagc tgggattaca
2460
ggcgctgcc accacgtccg gctaathtth tgtattttga gtagagacgg ggtttcacca
2520
taatggtcag gctgtttctc aactcctgat ctcagggtgat ccacccatct cggccttcca
2580
aagtgtctggg attactggcg tgagccaccg cccccggcct tgatgtttat tttataaagc
2640
actgtaatth tgtagctgat gacaaaaggc agccaaatgt ttttgataaa tcagtggcaa
2700
ctgtatthtth gtctthtthgaa ataactctga aaacatcagg acaacataga tttcaacctg
2760
atagcacacc acacacagtg agctgttgct thtthaaattc tgaagccttg tcaggthttht
2820
ttcctagatt tcaagtgtth aaaataattc tatctatgaa actgaaggat gaagcagatc
2880
tctgactgac atgtaaaaaa aaaatgcctt ttgaggggtgt atgggtggaga taaatgttht
2940
tgaattcagt aaaattgatt cctaagtata ttatcctaath cctgtthttht acagttggta
3000
taaaaaggca tgaaatatgt attcaatacc tcttatgtaa ccaaaacat tthtaattag
3060
ctthtthaaagg ctgagagagc atcatgtthc actggcatgc agtctgcctg cattgccaat
3120
gaagtctthc actgtthtaath atthtthgaact aatattatth ataacttatg aatttaactt
3180
thtthtthgaa actthtaataa thtgagtctc tgagaggata cthtthcaatth ccatggggga
3240
ctthtthttht ggggatctth aataagattc cthtthgatct accggaatat acatgtacag
3300
agtacattgg atcatgtthg aaagaaggca agtgaaaagg tcagagatga agtagcgaag
3360
ttatgggaata tcgtggaaag gatactagth gtgaaatgga aagagacaag ttatagtacc
3420

ccaaaagcaa aacaagcagg agatgcaaga gatgccccaa aaggacaaaag caacaatttt
3480
ctgttgccac ctttataccg gaagactctg ttgtagaaga aaagaaggct ttggtgcacc
3540
ttatgtggga ggaggagggg cagggcacgc tgatgctgag cgtacaggca gacaagagcg
3600
tagcctgctg ttgcctccat cactatgaaa tgacttattt tacctgaagg acccatgggt
3660
tatgttcttc taattccttt cactctccct aagccctctg agagagatga agatagatga
3720
ttttattgct actaaattga agggagcact atttcttttt gtcttttggt agcaaaaaat
3780
tgcaaaaaga attgtacatt cttgctaaaa ataaataaat aaataaaaaa ttaaaaaaac
3840
aagggaacct acaaaactca gcagtgttac tgtatttttt aaaaatattt ttatagactc
3900
attttcaggt tattaaatgt aagagaaaca gatacccttc ttttttaaag taggtaaatc
3960
attgatgatt tatattacca attttttagaa gtaattttct agtaagcttg tggcatcaga
4020
aaatactaga agattttttt agttaaatga gttagaacat ttatgaatga atataataaa
4080
tattttttca gaataaaata tggacccttt gtgtttacta atagataaag ccagatataa
4140
ttttttggtt ttaaggccac aaaatatggc ctttggttaa gaacactaaa gttagaaatc
4200
taaagttaga gcaacttttt aatggctatt tcctattatt gtaagtgtta aaaccctgc
4260
agaattcttg ataaggtgct atttatacta tatttcttat tataagataa ctgtctttag
4320
tcttcttagt actagtcttt ttagtactaa atcaatcagc aaacatcatc atttcacccc
4380
aaaattttgt cacagaaaag gcgtatcaaa tgaaaaataa tttcagagat ctttctttca
4440
agatattttt tcctgataaa atacattgtc ttgaagtaaa tacattgtca aaacctaat
4500
gcaattctgt taaatctaag taatttttag acagtgtttc accgtattat ttaggatgtg
4560
aaatgccatt tctttcactg attacaccat atacaggaaa caggtaaaac agtgaaaact
4620
ttattgtgct ggttgatgcc aacttggttg aaaagctctc tgcagaagaa gtgatctaga
4680
ctgacagaag tgttgctaata tacaagttgt gttctcatga cgtaattaga aagtaacttc
4740
tcaaagtaca acttttatga aaaagataag ctgttaaaaa aaggaaatcg taggttaatt
4800
taattgggaa aatgggcaat tgacagagac cattttccta acacatatat gtgctagtag
4860
tttaactttt taaaatttta cttctacggt ttgtaatatata aaaatttcta ttttaagttt
4920
agaatgttat acgtaccgaa agtatgcagc caaatcgatc agatcaaacc attttacctg
4980
gagtttggtg ctggttttta cttctctgaa tctgtataag aaaaataaag acaattgaac
5040

ttccaaaaaa aaaaa
5055

<210> 3326
<211> 254
<212> PRT
<213> Homo sapiens

<400> 3326
Glu Lys Ile Thr Thr Trp Gln Asp Pro Arg Lys Ala Met Asn Gln Pro
1 5 10 15
Leu Asn His Met Asn Leu His Pro Ala Val Ser Ser Thr Pro Val Pro
20 25 30
Gln Arg Ser Met Ala Val Ser Gln Pro Asn Leu Val Met Asn His Gln
35 40 45
His Gln Gln Gln Met Ala Pro Ser Thr Leu Ser Gln Gln Asn Arg Pro
50 55 60
Thr Gln Asn Pro Pro Ala Gly Leu Met Ser Met Pro Asn Ala Leu Thr
65 70 75 80
Thr Gln Gln Gln Gln Gln Gln Lys Leu Arg Leu Gln Arg Ile Gln Met
85 90 95
Glu Arg Glu Arg Ile Arg Met Arg Gln Glu Glu Leu Met Arg Gln Glu
100 105 110
Ala Ala Leu Cys Arg Gln Leu Pro Met Glu Ala Glu Thr Leu Ala Pro
115 120 125
Val Gln Ala Ala Val Asn Pro Pro Thr Met Thr Pro Asp Met Arg Ser
130 135 140
Ile Thr Asn Asn Ser Ser Asp Pro Phe Leu Asn Gly Gly Pro Tyr His
145 150 155 160
Ser Arg Glu Gln Ser Thr Asp Ser Gly Leu Gly Leu Gly Cys Tyr Ser
165 170 175
Val Pro Thr Thr Pro Glu Asp Phe Leu Ser Asn Val Asp Glu Met Asp
180 185 190
Thr Gly Glu Asn Ala Gly Gln Thr Pro Met Asn Ile Asn Pro Gln Gln
195 200 205
Thr Arg Phe Pro Asp Phe Leu Asp Cys Leu Pro Gly Thr Asn Val Asp
210 215 220
Leu Gly Thr Leu Glu Ser Glu Asp Leu Ile Pro Leu Phe Asn Asp Val
225 230 235 240
Glu Ser Ala Leu Asn Lys Ser Glu Pro Phe Leu Thr Trp Leu
245 250

<210> 3327
<211> 2263
<212> DNA
<213> Homo sapiens

<400> 3327
nacgcgtgcg gaaccttcaa catttccgag gcctgcctgc ctccttccac tgctggctgg
60
agctgcctgg agaacttcgg ggactgccgg ccaccctgga ggagacagca ggggattcag
120
gcctcatcca ctgccaggcc caccagtttt atccctccat gtcccagcgg gagctcccag
180

tgcccatcta cgtcaccag ggtgaagccc agaggctgga caacacccat gctctttatg
240
tgatcctgta cgactgcgcc atggggccacc cggactgcag ccactgccaa gcggccagca
300
gaggagccca ggtcctaccc ggacgaggaa ggcccgaac actggtctga ctcacgtac
360
gagcatgtca tgaagttgcg ccaggcagcc ctgaaatcag ctcgagacat gtgggctgat
420
tacatcctgt ttgtagatgc ggacaacctg atcctcaacc ctgacacact gagcctgctc
480
atcgctgaga acaagacggt ggtcgcccc atgctggatt cccgggctgc gtactccaac
540
ttctggtgtg gaatgacttc ccagggtac tacaagcgca cacctgccta catccctatc
600
cgcaagcgag accgccggg ctgctttgca gttcccatgg tgcactcgac cttcctgatc
660
gacctgcgga aggcggcgtc caggaacctg gccttctacc cacctcacc tgactacacc
720
tggtcctttg acgacatcat cgtctttgcc ttctcctgca agcaggcaga ggttcagatg
780
tatgtgtgca acaaggagga gtacggattc ttgccagtgc cattgcgcgc ccacagcacc
840
ctccaggatg aggccgagag cttcatgcat gtgcagctgg aggtcatggt gaagcacccg
900
cccgcagagc cctcccgtt catctcggct cccaccaaga caccggacaa gatgggcttc
960
gacgaggtct tcatgatcaa cctgaggcgg cggcaggacc ggcgggagcg catgctgcgg
1020
gcgctgcagg cacaggagat cgagtgccgg ctggtggagg ccgtggacgg caaagccatg
1080
aacaccagcc aggtggaggc gctggggatc cagatgctgc ctggctaccg ggaccctac
1140
cacggccggc ccctcaccaa gggtgagctg ggctgcttcc tgagccacta caacatctgg
1200
aaggagggtg tggaccgggg gctgcagaaa tcgcttgtgt ttgaggatga cctgcgtttt
1260
gagatcttct tcaagagacg tctgatgaac ctcatgcggg atgtggagcg ggagggcctg
1320
gactgggacc tcatctatgt gggccggaag cggatgcagg tggagcacc cgagaaggct
1380
gtgcctcgcg tgaggaacct ggtggaggcc gactattcct actggacctt ggctacgtg
1440
atctccctgc aaggcgcccg caaactgctg gctgctgagc cgctctccaa gatgctgcct
1500
gtggacgagt tctgcccgt catgttcgac aaacacccag tgtccgagta caaggccac
1560
ttctccctcc gcaacctgca tgccttctct gtggagccgc tgctcatcta cccacacac
1620
tacacaggag acgatggcta tgtgagtgc accgagactt cagtcgtatg gaacaatgag
1680
cacgtcaaga ccgactggga ccgcgccaag tcccagaaga tgcgggagca gcaggcactg
1740
agccgtgagg ccaagaactc ggacgtgctc cagtcccccac tggacagtgc tgcccgggat
1800

gaactctgag gggtagcagc cagaaagcca aagcagccat cggtaggcca ggctccacgt
 1860gacatcaggg ccacctctgg accccttggc aggccacaga gggctctcgt 1920
 gtggggtggt gtccagccag ctcttgctaa gcaatcacgt gcacacaggc agcattaatg
 1980
 gagtgcctac tgcattgccag caacaggggt tggccctggg gaattgggag gaaccaagcc
 2040
 ctcttcattct gttcatgtgc ccagcattta ttaagcacct gctgtatgca aggttcccat
 2100
 gttacggcag tgaatgaggc ataattgttc cctccatcag cgattgattc agtcatcaag
 2160
 cagttactga tcagattaag aatcaggcac tagtgatata cattcatttt taaaattcat
 2220
 tcaaggaaaa aaaaaaaaaa aaaaaaaagc gcggccgcaa gct
 2263

<210> 3328

<211> 521

<212> PRT

<213> Homo sapiens

<400> 3328

Ser	Cys	Thr	Thr	Ala	Pro	Trp	Ala	Thr	Arg	Thr	Ala	Ala	Thr	Ala	Lys
1				5					10					15	
Arg	Pro	Ala	Glu	Glu	Pro	Arg	Ser	Tyr	Pro	Asp	Glu	Glu	Gly	Pro	Lys
		20						25					30		
His	Trp	Ser	Asp	Ser	Arg	Tyr	Glu	His	Val	Met	Lys	Leu	Arg	Gln	Ala
		35					40					45			
Ala	Leu	Lys	Ser	Ala	Arg	Asp	Met	Trp	Ala	Asp	Tyr	Ile	Leu	Phe	Val
	50					55				60					
Asp	Ala	Asp	Asn	Leu	Ile	Leu	Asn	Pro	Asp	Thr	Leu	Ser	Leu	Leu	Ile
65				70					75					80	
Ala	Glu	Asn	Lys	Thr	Val	Val	Ala	Pro	Met	Leu	Asp	Ser	Arg	Ala	Ala
		85						90						95	
Tyr	Ser	Asn	Phe	Trp	Cys	Gly	Met	Thr	Ser	Gln	Gly	Tyr	Tyr	Lys	Arg
		100						105					110		
Thr	Pro	Ala	Tyr	Ile	Pro	Ile	Arg	Lys	Arg	Asp	Arg	Arg	Gly	Cys	Phe
		115					120					125			
Ala	Val	Pro	Met	Val	His	Ser	Thr	Phe	Leu	Ile	Asp	Leu	Arg	Lys	Ala
	130					135					140				
Ala	Ser	Arg	Asn	Leu	Ala	Phe	Tyr	Pro	Pro	His	Pro	Asp	Tyr	Thr	Trp
145			150						155					160	
Ser	Phe	Asp	Asp	Ile	Ile	Val	Phe	Ala	Phe	Ser	Cys	Lys	Gln	Ala	Glu
		165						170					175		
Val	Gln	Met	Tyr	Val	Cys	Asn	Lys	Glu	Glu	Tyr	Gly	Phe	Leu	Pro	Val
	180							185					190		
Pro	Leu	Arg	Ala	His	Ser	Thr	Leu	Gln	Asp	Glu	Ala	Glu	Ser	Phe	Met
	195						200					205			
His	Val	Gln	Leu	Glu	Val	Met	Val	Lys	His	Pro	Pro	Ala	Glu	Pro	Ser
	210					215						220			
Arg	Phe	Ile	Ser	Ala	Pro	Thr	Lys	Thr	Pro	Asp	Lys	Met	Gly	Phe	Asp
225				230						235				240	
Glu	Val	Phe	Met	Ile	Asn	Leu	Arg	Arg	Arg	Gln	Asp	Arg	Arg	Glu	Arg
		245						250					255		
Met	Leu	Arg	Ala	Leu	Gln	Ala	Gln	Glu	Ile	Glu	Cys	Arg	Leu	Val	Glu

				260					265					270		
Ala	Val	Asp	Gly	Lys	Ala	Met	Asn	Thr	Ser	Gln	Val	Glu	Ala	Leu	Gly	
		275					280					285				
Ile	Gln	Met	Leu	Pro	Gly	Tyr	Arg	Asp	Pro	Tyr	His	Gly	Arg	Pro	Leu	
	290					295					300					
Thr	Lys	Gly	Glu	Leu	Gly	Cys	Phe	Leu	Ser	His	Tyr	Asn	Ile	Trp	Lys	
305					310					315					320	
Glu	Val	Val	Asp	Arg	Gly	Leu	Gln	Lys	Ser	Leu	Val	Phe	Glu	Asp	Asp	
				325					330					335		
Leu	Arg	Phe	Glu	Ile	Phe	Phe	Lys	Arg	Arg	Leu	Met	Asn	Leu	Met	Arg	
			340					345					350			
Asp	Val	Glu	Arg	Glu	Gly	Leu	Asp	Trp	Asp	Leu	Ile	Tyr	Val	Gly	Arg	
	355					360						365				
Lys	Arg	Met	Gln	Val	Glu	His	Pro	Glu	Lys	Ala	Val	Pro	Arg	Val	Arg	
	370					375					380					
Asn	Leu	Val	Glu	Ala	Asp	Tyr	Ser	Tyr	Trp	Thr	Leu	Ala	Tyr	Val	Ile	
385					390					395					400	
Ser	Leu	Gln	Gly	Ala	Arg	Lys	Leu	Leu	Ala	Ala	Glu	Pro	Leu	Ser	Lys	
				405					410					415		
Met	Leu	Pro	Val	Asp	Glu	Phe	Leu	Pro	Val	Met	Phe	Asp	Lys	His	Pro	
			420					425					430			
Val	Ser	Glu	Tyr	Lys	Ala	His	Phe	Ser	Leu	Arg	Asn	Leu	His	Ala	Phe	
	435					440						445				
Ser	Val	Glu	Pro	Leu	Leu	Ile	Tyr	Pro	Thr	His	Tyr	Thr	Gly	Asp	Asp	
	450					455					460					
Gly	Tyr	Val	Ser	Asp	Thr	Glu	Thr	Ser	Val	Val	Trp	Asn	Asn	Glu	His	
465					470					475					480	
Val	Lys	Thr	Asp	Trp	Asp	Arg	Ala	Lys	Ser	Gln	Lys	Met	Arg	Glu	Gln	
				485					490					495		
Gln	Ala	Leu	Ser	Arg	Glu	Ala	Lys	Asn	Ser	Asp	Val	Leu	Gln	Ser	Pro	
			500					505					510			
Leu	Asp	Ser	Ala	Ala	Arg	Asp	Glu	Leu								
	515						520									

```
<210> 3329
<211> 705
<212> DNA
<213> Homo sapiens
```

```
<400> 3329
ngtgcacgcg tgggtggcaga gcctggcctg gacgtgcctg agggcgctgc cctgaacctc
60
agctgccgcc tcctgggtgg ccctgggcct gtggggcaact ccacctttgc atggttcttg
120
aatgaccggc ggctgcacgc ggagcctgtg cccactctcg ccttcaccca cgtggctcgt
180
gctcaagctg ggatgtacca ctgcctggct gagctcccca ctggggctgc tgcctctgct
240
ccagtcatgc tccgtgtgct ctaccctccc aagacgccca ccatgatggt cttcgtggag
300
cctgaggggtg gcctccgggg catcctggat tgccgagtgg acagcgagcc gctcgccagc
360
ctgactctcc accttggcag tcgactgggtg gcctccagtc agccccaggg tgctcctgca
420
```

gagccacaca tccatgtcct ggcttcccc aatgccctga gggaggacat cgaggcgctg
480
aggcccagcg accaagggga atacatctgt tctgcctcaa atgtcctggg ctctgcctct
540
acctccacct actttggggg cagagccctg caccgcctgc atcagttcca gcagctgctc
600
tgggtcctgg gactgctggg gggcctcctg ctctgctgtg tgggcctggg ggctgctac
660
acctggagaa ggaggcgtgt ttgtaagcag agcatgggcg agaat
705

```
<210> 3330
<211> 235
<212> PRT
<213> Homo sapiens
```

<400> 3330																
Xaa	Ala	Arg	Val	Val	Ala	Glu	Pro	Gly	Leu	Asp	Val	Pro	Glu	Gly	Ala	
1				5					10					15		
Ala	Leu	Asn	Leu	Ser	Cys	Arg	Leu	Leu	Gly	Gly	Pro	Gly	Pro	Val	Gly	
			20					25					30			
Asn	Ser	Thr	Phe	Ala	Trp	Phe	Trp	Asn	Asp	Arg	Arg	Leu	His	Ala	Glu	
		35					40					45				
Pro	Val	Pro	Thr	Leu	Ala	Phe	Thr	His	Val	Ala	Arg	Ala	Gln	Ala	Gly	
	50					55					60					
Met	Tyr	His	Cys	Leu	Ala	Glu	Leu	Pro	Thr	Gly	Ala	Ala	Ala	Ser	Ala	
65					70					75					80	
Pro	Val	Met	Leu	Arg	Val	Leu	Tyr	Pro	Pro	Lys	Thr	Pro	Thr	Met	Met	
				85					90					95		
Val	Phe	Val	Glu	Pro	Glu	Gly	Gly	Leu	Arg	Gly	Ile	Leu	Asp	Cys	Arg	
			100					105					110			
Val	Asp	Ser	Glu	Pro	Leu	Ala	Ser	Leu	Thr	Leu	His	Leu	Gly	Ser	Arg	
		115					120					125				
Leu	Val	Ala	Ser	Ser	Gln	Pro	Gln	Gly	Ala	Pro	Ala	Glu	Pro	His	Ile	
	130					135					140					
His	Val	Leu	Ala	Ser	Pro	Asn	Ala	Leu	Arg	Val	Asp	Ile	Glu	Ala	Leu	
145					150					155					160	
Arg	Pro	Ser	Asp	Gln	Gly	Glu	Tyr	Ile	Cys	Ser	Ala	Ser	Asn	Val	Leu	
				165					170					175		
Gly	Ser	Ala	Ser	Thr	Ser	Thr	Tyr	Phe	Gly	Val	Arg	Ala	Leu	His	Arg	
			180					185					190			
Leu	His	Gln	Phe	Gln	Gln	Leu	Leu	Trp	Val	Leu	Gly	Leu	Leu	Val	Gly	
		195					200					205				
Leu	Leu	Leu	Leu	Leu	Leu	Gly	Leu	Gly	Ala	Cys	Tyr	Thr	Trp	Arg	Arg	
	210					215					220					
Arg	Arg	Val	Cys	Lys	Gln	Ser	Met	Gly	Glu	Asn						
225					230					235						

```
<210> 3331
<211> 1644
<212> DNA
<213> Homo sapiens
```

<400> 3331

nnggaaacgc gctggctgac tggggtcggc gtttagttca gcgcagcgac tcggggacct
60
ggagctgacg cctagacact tgtattagct ttaatagaag agaaatggag gagccataga
120
atattaagga tgaattcagg aaggcctgag accatggaaa acttgccctgc tctctacact
180
attttccaag gagaggttgc tatggtgaca gactatgggg cctttatcaa aatcccaggc
240
tgtcggaagc aaggtctggt ccatcgaact catatgtcat cctgtcgggt ggataagccc
300
tctgagatag tagatgttgg agataaagtg tgggtgaagc ttattggccg agagatgaaa
360
aatgatagaa taaaagtatc cctctccatg aaggttgtca atcaagggaac tgggaaagac
420
cttgatccca acaatgtttc attgagcaag aagagaggcg gaggcgatcc ttccaggatt
480
acactgggca gaagatcacc cttgaggctg tcttgaacac tacctgcaag aagtgtggct
540
gtaaaggcca ctttgcaaaa gattgtttca tgcaaccagg tgggactaaa tactctctga
600
tacctgatga ggaagaggaa aaggaagagg caaagtcagc agagtttgag aagcctgacc
660
ctacaaggaa tccttctaga aaaagaaaga aggagaagaa gaaaaagaaa catagagata
720
ggaagtcac tgactctgac agctcagact ctgagagtga tacaggcaag agggcaaggc
780
acacatcaaa agacagcaag gcagcaaaga agaagaaaaa gaagaagaag cacaagaaga
840
agcacaagga gtgagagtat aaagagtgtg gggggtgggt gagagtaaga aaccaggagc
900
ctcgtgcctt gagactcctg gaaagactca atagtggaga tatagcctcc caccctatta
960
acttcgctcc catgggagat ggcttccctt catgcaacag gcaggtttgg gagtttagagg
1020
tcaaaagcag ctgcctgaat gagttgttgt ttccttatca ctctgggtcc ctttgcaagt
1080
gaaccctgca gctcaccat tcattcacc aacttccttc attcagcagg aggccttatt
1140
accctctcca gctgccactg ccagagctgg attcctgtaa aggagtccag gctagagcca
1200
cagagactgt tgtggagggt agttcggctg tagtttagagt gattggaccc ttcctattgg
1260
tctgtcctgg gccaaactgg ggggtgatct tgctgcatcc aacatgggag cagagactgg
1320
cagcaggagg ggggaacatg gtgagaagtg gtgctcactt tccccattcc tcctaacafa
1380
gttctactat gctagaagtg gcatccagcg gccacagcta gaaaacagtc tgcagtgtga
1440
cttaacttgt gtattgcatt ccagcagacc actgaaccag acagcgaagc caagatcatt
1500
gttctacttt gtatttacta ctgtgtgaat cagttgatcc tacttcaggt ccttgcttaa
1560
attcctgtca ctaaattgaa atgtgtttgg ttttaaaaaa aaaaaaaaaa aaaaaaaaaa
1620

aaaaaaaaaa aaaaaaaaaa aaaa
1644

<210> 3332

<211> 128

<212> PRT

<213> Homo sapiens

<400> 3332

Met	Asn	Ser	Gly	Arg	Pro	Glu	Thr	Met	Glu	Asn	Leu	Pro	Ala	Leu	Tyr
1				5					10					15	
Thr	Ile	Phe	Gln	Gly	Glu	Val	Ala	Met	Val	Thr	Asp	Tyr	Gly	Ala	Phe
			20					25					30		
Ile	Lys	Ile	Pro	Gly	Cys	Arg	Lys	Gln	Gly	Leu	Val	His	Arg	Thr	His
			35				40					45			
Met	Ser	Ser	Cys	Arg	Val	Asp	Lys	Pro	Ser	Glu	Ile	Val	Asp	Val	Gly
	50					55					60				
Asp	Lys	Val	Trp	Val	Lys	Leu	Ile	Gly	Arg	Glu	Met	Lys	Asn	Asp	Arg
65					70				75					80	
Ile	Lys	Val	Ser	Leu	Ser	Met	Lys	Val	Val	Asn	Gln	Gly	Thr	Gly	Lys
				85					90					95	
Asp	Leu	Asp	Pro	Asn	Asn	Val	Ser	Leu	Ser	Lys	Lys	Arg	Gly	Gly	Gly
			100					105					110		
Asp	Pro	Ser	Arg	Ile	Thr	Leu	Gly	Arg	Arg	Ser	Pro	Leu	Arg	Leu	Ser
			115				120					125			

<210> 3333

<211> 2422

<212> DNA

<213> Homo sapiens

<400> 3333

ctcgagtttg accagcagca ggggtcgggtg tgtccctctg aatctgagat ctatgaggca
60
ggagctgggg acaggatggc aggagcgccc atggctgctg ctgtacagcc tgctgagggtg
120
actgttgaag ttggtgagga cctccacatg caccacgttc gtgaccggga gatgcctgaa
180
gctttggagt ttaacctttc tgccaatcca gagtcaagca caatattcca gaggaactct
240
caaacagaag ctttggagtt taacctttct gccaatccag aggcaagcac aatattccag
300
aggaactctc aaacagatgt tgtagaaata agaagaagca actgtacaaa ccatgtatct
360
gctgtgcgtt tcagtcaaca atacagcttg tgttcgacaa tttccttga tgacagcaca
420
gccatccagc attatcttac aatgacaata atatctgtga ccttgagat acctcatcat
480
atcacacaaa gagatgcaga tagaactttg agcatacctg atgaacagtt acactcattt
540
gcggtttcca ccgtgcacat tatgaagaaa agaaatggag gtgggagttt aaataactat
600
tcctcctcca ttcacatgac tcccagcacc agccaggagg accctcagtt cagtgttcct
660

cccactgcca acacacccac ccccgtttgc aagcgggtcca tgcgctgggc caacctgttt
720
acatctgaga aagggagtca cccagacaaa gagaggaaag ccccgagaa tcatgctgac
780
accatcggga gcggcagagc catccccatt aaacagggca tgctcttaaa gcgaagtggg
840
aaatggctga agacatggaa aaagaaatac gtcaccctgt gttccaatgg catgctcacc
900
tattattcaa gcttaggtga ttatatgaag aatattcata aaaaagagat tgaccttcag
960
acatctacca tcaaagtcac aggaaagtgg ccatccctag ccacatcggc ctgcacaccc
1020
atctccagct ctaaaagcaa tggcctatcc aaggacatgg acaccgggct gggtgactcc
1080
atatgcttca gccccagtat ctccagcacc accagcccca agctcaaccc gccccctct
1140
cctcatgcta ataaaaagaa acacctaaag aagaaaagca ccaacaactt tatgattgtg
1200
tctgccactg gccaaacgtg gcactttgaa gccacgacgt atgaggagcg ggatgcctgg
1260
gtccaagcca tccagagcca gatcctggcc agcctgcagt catgcgagag cagtaaaagc
1320
aagtcccagc tgaccagcca aagcgaggcc atggccctgc agtcgatcca aaacatgcgt
1380
gggaacgccc actgtgtgga ctgtgagacc cagaatccta agtgggcccag tttgaacttg
1440
ggagtccctca tgtgtattga atgctcaggt atccaccgca gtcttggcac ccgcctttcc
1500
cgtgtgcgat ctctggagct ggatgactgg ccagttgagc tcaggaaggt tatgtcatct
1560
attggcaatg agctagccaa cagcatctgg gaagagagca gccaggggagc gacaaaacca
1620
tcggtagact ccacaaggga agagaaggaa cgggtgatcc gttccaaata tgaggagaag
1680
ctctttctgg cccactacc ctgactgag ctgtccctgg gccagcagct gctgcgggcc
1740
accgctgatg aggacctgca gacagccatc ctgctgctgg cacatggctc ccgtgaggag
1800
gtgaacgaga cctgtgggga gggagacggc tgcacggcgc tccatctggc ctgdcgcaag
1860
gggaatgtgg tcctggcgca gctcctgac tggtagggg tggacgtcat ggcccagat
1920
gccacggga acacagcgct gacctacgc cggcaggcct ccagccagga gtgcatcaac
1980
gtgcttctgc agtacggctg ccccgacaag tgtgtgtagt atctgtttta tttgactgca
2040
gtctccttgg tgcaaaaaca aaatgggaaa aataaggata actcagaatt tcaaaaggaa
2100
atcaciaaatt cagctagtaa tagcattttc agtacttttc gtaaactaag taaatacaca
2160
aaatgttgat ttttctgacc ataagacgta ttttatgtcc ttttgccaag gtggatttgt
2220
tagtctcagg ccctcctggc cacattgccc aagtcacaca ggcttctgta ttatgtattt
2280

agataaaatg tgtgaaaaca tatttgaaat aaagttcata aatatgcaaa aaaaaaaaaa
 2340
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagaaa
 2400
 aaaaaaaggg aaaaaaaaaa ag
 2422

<210> 3334

<211> 672

<212> PRT

<213> Homo sapiens

<400> 3334

Leu	Glu	Phe	Asp	Gln	Gln	Gln	Gly	Ser	Val	Cys	Pro	Ser	Glu	Ser	Glu
1				5					10				15		
Ile	Tyr	Glu	Ala	Gly	Ala	Gly	Asp	Arg	Met	Ala	Gly	Ala	Pro	Met	Ala
			20					25					30		
Ala	Ala	Val	Gln	Pro	Ala	Glu	Val	Thr	Val	Glu	Val	Gly	Glu	Asp	Leu
			35					40					45		
His	Met	His	His	Val	Arg	Asp	Arg	Glu	Met	Pro	Glu	Ala	Leu	Glu	Phe
	50					55				60					
Asn	Leu	Ser	Ala	Asn	Pro	Glu	Ser	Ser	Thr	Ile	Phe	Gln	Arg	Asn	Ser
65					70					75				80	
Gln	Thr	Glu	Ala	Leu	Glu	Phe	Asn	Pro	Ser	Ala	Asn	Pro	Glu	Ala	Ser
			85					90					95		
Thr	Ile	Phe	Gln	Arg	Asn	Ser	Gln	Thr	Asp	Val	Val	Glu	Ile	Arg	Arg
			100					105					110		
Ser	Asn	Cys	Thr	Asn	His	Val	Ser	Ala	Val	Arg	Phe	Ser	Gln	Gln	Tyr
	115						120					125			
Ser	Leu	Cys	Ser	Thr	Ile	Phe	Leu	Asp	Asp	Ser	Thr	Ala	Ile	Gln	His
	130					135					140				
Tyr	Leu	Thr	Met	Thr	Ile	Ile	Ser	Val	Thr	Leu	Glu	Ile	Pro	His	His
145					150					155				160	
Ile	Thr	Gln	Arg	Asp	Ala	Asp	Arg	Thr	Leu	Ser	Ile	Pro	Asp	Glu	Gln
			165						170					175	
Leu	His	Ser	Phe	Ala	Val	Ser	Thr	Val	His	Ile	Met	Lys	Lys	Arg	Asn
			180					185					190		
Gly	Gly	Gly	Ser	Leu	Asn	Asn	Tyr	Ser	Ser	Ser	Ile	Pro	Ser	Thr	Pro
		195					200					205			
Ser	Thr	Ser	Gln	Glu	Asp	Pro	Gln	Phe	Ser	Val	Pro	Pro	Thr	Ala	Asn
	210					215					220				
Thr	Pro	Thr	Pro	Val	Cys	Lys	Arg	Ser	Met	Arg	Trp	Ser	Asn	Leu	Phe
225					230					235				240	
Thr	Ser	Glu	Lys	Gly	Ser	His	Pro	Asp	Lys	Glu	Arg	Lys	Ala	Pro	Glu
			245						250					255	
Asn	His	Ala	Asp	Thr	Ile	Gly	Ser	Gly	Arg	Ala	Ile	Pro	Ile	Lys	Gln
			260					265					270		
Gly	Met	Leu	Leu	Lys	Arg	Ser	Gly	Lys	Trp	Leu	Lys	Thr	Trp	Lys	Lys
	275						280					285			
Lys	Tyr	Val	Thr	Leu	Cys	Ser	Asn	Gly	Met	Leu	Thr	Tyr	Tyr	Ser	Ser
	290					295					300				
Leu	Gly	Asp	Tyr	Met	Lys	Asn	Ile	His	Lys	Lys	Glu	Ile	Asp	Leu	Gln
305					310					315				320	
Thr	Ser	Thr	Ile	Lys	Val	Pro	Gly	Lys	Trp	Pro	Ser	Leu	Ala	Thr	Ser

					325					330					335
Ala	Cys	Thr	Pro	Ile	Ser	Ser	Ser	Lys	Ser	Asn	Gly	Leu	Ser	Lys	Asp
			340					345					350		
Met	Asp	Thr	Gly	Leu	Gly	Asp	Ser	Ile	Cys	Phe	Ser	Pro	Ser	Ile	Ser
		355					360					365			
Ser	Thr	Thr	Ser	Pro	Lys	Leu	Asn	Pro	Pro	Pro	Ser	Pro	His	Ala	Asn
	370					375					380				
Lys	Lys	Lys	His	Leu	Lys	Lys	Lys	Ser	Thr	Asn	Asn	Phe	Met	Ile	Val
385					390					395					400
Ser	Ala	Thr	Gly	Gln	Thr	Trp	His	Phe	Glu	Ala	Thr	Thr	Tyr	Glu	Glu
				405					410					415	
Arg	Asp	Ala	Trp	Val	Gln	Ala	Ile	Gln	Ser	Gln	Ile	Leu	Ala	Ser	Leu
			420					425					430		
Gln	Ser	Cys	Glu	Ser	Ser	Lys	Ser	Lys	Ser	Gln	Leu	Thr	Ser	Gln	Ser
		435					440					445			
Glu	Ala	Met	Ala	Leu	Gln	Ser	Ile	Gln	Asn	Met	Arg	Gly	Asn	Ala	His
	450					455					460				
Cys	Val	Asp	Cys	Glu	Thr	Gln	Asn	Pro	Lys	Trp	Ala	Ser	Leu	Asn	Leu
465					470					475					480
Gly	Val	Leu	Met	Cys	Ile	Glu	Cys	Ser	Gly	Ile	His	Arg	Ser	Leu	Gly
				485					490					495	
Thr	Arg	Leu	Ser	Arg	Val	Arg	Ser	Leu	Glu	Leu	Asp	Asp	Trp	Pro	Val
			500					505					510		
Glu	Leu	Arg	Lys	Val	Met	Ser	Ser	Ile	Gly	Asn	Glu	Leu	Ala	Asn	Ser
		515					520					525			
Ile	Trp	Glu	Glu	Ser	Ser	Gln	Gly	Arg	Thr	Lys	Pro	Ser	Val	Asp	Ser
	530					535					540				
Thr	Arg	Glu	Glu	Lys	Glu	Arg	Trp	Ile	Arg	Ser	Lys	Tyr	Glu	Glu	Lys
545					550					555					560
Leu	Phe	Leu	Ala	Pro	Leu	Pro	Cys	Thr	Glu	Leu	Ser	Leu	Gly	Gln	Gln
				565					570					575	
Leu	Leu	Arg	Ala	Thr	Ala	Asp	Glu	Asp	Leu	Gln	Thr	Ala	Ile	Leu	Leu
			580					585					590		
Leu	Ala	His	Gly	Ser	Arg	Glu	Glu	Val	Asn	Glu	Thr	Cys	Gly	Glu	Gly
		595					600					605			
Asp	Gly	Cys	Thr	Ala	Leu	His	Leu	Ala	Cys	Arg	Lys	Gly	Asn	Val	Val
	610					615					620				
Leu	Ala	Gln	Leu	Leu	Ile	Trp	Tyr	Gly	Val	Asp	Val	Met	Ala	Arg	Asp
625					630					635					640
Ala	His	Gly	Asn	Thr	Ala	Leu	Thr	Tyr	Ala	Arg	Gln	Ala	Ser	Ser	Gln
				645					650					655	
Glu	Cys	Ile	Asn	Val	Leu	Leu	Gln	Tyr	Gly	Cys	Pro	Asp	Lys	Cys	Val
			660					665					670		

<210> 3335

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3335

ngatccatc acgcgttcag ggcagcggaa ttccggctcc ccagggggca gctcaggcag
60

ggcctcttca ggagtgacgt cggggacctc ctccccaggg cctgtctcat gctgtctcgg
120

cccagactgc ttgttgaagg ggttgagggtg ggcttgccgg aaacggggcca gcttctcatc
 180
 atattccata gcattcccacc tgcattgcct gccagggccc aggggctcgc agggacagga
 240
 tggccattcc tctagggctg ctggccacgg aagcctggcc gtgggttcgg cacctgctga
 300
 ccgccgcctc gcatttgccc tgagacaggg ctggacagcc aggattaccg ctgtgccgag
 360
 tgccgggagc ccatctctct gcgggggtgtg cccagtggag ccaggcagtg cgactacacc
 420
 ggccagtact actgcagccc ctgccactgg aacgccctgg ctgtgatccc tgcacgc
 477

<210> 3336

<211> 59

<212> PRT

<213> Homo sapiens

<400> 3336

Pro	Pro	Pro	Arg	Ile	Cys	Pro	Glu	Thr	Gly	Leu	Asp	Ser	Gln	Asp	Tyr
1				5					10					15	
Arg	Cys	Ala	Glu	Cys	Arg	Ala	Pro	Ile	Ser	Leu	Arg	Gly	Val	Pro	Ser
			20					25					30		
Glu	Ala	Arg	Gln	Cys	Asp	Tyr	Thr	Gly	Gln	Tyr	Tyr	Cys	Ser	Pro	Cys
		35					40					45			
His	Trp	Asn	Ala	Leu	Ala	Val	Ile	Pro	Ala	Arg					
	50						55								

<210> 3337

<211> 679

<212> DNA

<213> Homo sapiens

<400> 3337

nagatcttcc tcttgaatga tttgggcagc gagctctgta tgaagaagaa aaaggggaaa
 60
 aaaaagagaa agagagacac cccacagaga ggggggaagg aggttagatg gggcagtcct
 120
 agcttagcct ccaaagacac agatagagtg agagagagag acagagagag acacagagac
 180
 agacagagac caaaacagaa gcggcaaacg gcaaaaacga agcagaatca atgcaagtta
 240
 gagaaaaaaaa taaaactaaa catcagagca gggaaaagtc atctactccg tatcacacct
 300
 gtgtattagc ttaaccagaa ataagctgga agaggagttc agtagcctct cagcccccta
 360
 aagatgttgg tcataccccc tctttcaccg tctgagtcga gaggacacca agccaaacaa
 420
 actgtgcccc aaactgggtc atctagtcct cccaggtcct tccttgctaa ctcgaggaaa
 480
 caaggaaaac caactttgga tggcaacttc aacaaggtaa ccctccttct ttcaatggcc
 540
 agactgatgc ccactgacaa tggctttgag atgcttggac agcagactgt catgtcaaga
 600

ctgcccagac cccaccaca ctgtggaaaa gggcagcacc agaccactg gagatgaggg
 660
 tcttgagcca agtgctagc
 679

<210> 3338
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 3338
 Xaa Ile Phe Leu Leu Asn Asp Leu Gly Ser Glu Leu Cys Met Lys Lys
 1 5 10 15
 Lys Lys Gly Lys Lys Lys Arg Lys Arg Asp Thr Pro Gln Arg Gly Gly
 20 25 30
 Lys Glu Val Arg Trp Gly Ser Leu Ser Leu Ala Ser Lys Asp Thr Asp
 35 40 45
 Arg Val Arg Glu Arg Asp Arg Glu Arg His Arg Asp Arg Gln Arg Pro
 50 55 60
 Lys Gln Lys Arg Gln Thr Ala Lys Thr Lys Gln Asn Gln Cys Lys Leu
 65 70 75 80
 Glu Lys Lys Ile Lys Leu Asn Ile Arg Ala Gly Lys Ser His Leu Leu
 85 90 95
 Arg Ile Thr Pro Val Tyr
 100

<210> 3339
 <211> 1341
 <212> DNA
 <213> Homo sapiens

<400> 3339
 tttttttttt tttttcacca aaacaatttt tatttccagt gtttaattgg gtatgcacac
 60
 aggcatgaca caggtttggg ttcattaagt cctcatgcag aattatatc ttctcgataa
 120
 agaagccagt tccatccagg atccactatc tacacaccta tgttacaaca ttatatcaaa
 180
 tctggtatct gaagaaaaga tacacattta atatgttcat ttaagttacg tattttgcag
 240
 aaagattaaa aattcattca cacaaaactc aaaaactgta ttaaaagttt gaatataaaa
 300
 ctcagatcca cctggaatga ctaaagaatg gaagtctgt atccacctgt gttaaaactg
 360
 gtaaatgtaa tgatatctgt taccaataaa acgcattcgt ttattcaatg taagtaagtt
 420
 atctaatttt aacaatatgg caccctaaaa accaactgta tttttatgat gaggcacttt
 480
 tgtagtgat gaaacaaaa gaacaaattt gctgcacact gatgccagcg attttcttca
 540
 gtgattttgg gtatatgcta tgtagtaagt tgcaacaaat accttgctca tttgtataca
 600
 actatccgat atatttttaa tatatatata tatatatgtt cttctggctg tagtaatgca
 660

ctgtaaagct atttcacagt gcaaaatgat gaaaccagcc caaatgaagg ctgcataata
 720
 acaattctga tacaagaaaa tattgacaga gttactggaa cgtgtaacag tagttttttt
 780
 acttgctaga gtggacatac cccagttta aagacagga tgaaactctg ctttagtgcc
 840
 tgggggttca gacagtttat gaggttgggc attcgctgca gaactagcat ttttgctcac
 900
 gttctggaag ctttctccgt ttatttggtc aggtgactgt ggtggtatgg aaagaagggg
 960
 cctgtttggt gaagccaagg tgctggaaga actgcctgtg ttgcaatgaa gagacaaagg
 1020
 tgtgtcggtc gtggctatct ctctgtgtgt tgggttctct gtctggggat ctccgatttc
 1080
 tcctctgcta aggtcagagg tactggtgcg taggcgttcc ctggccagcc agtctgagat
 1140
 ggaaagggtc tgggctgctg attttggttt taaccggttt acagctgaaa gttcagattc
 1200
 tctctccccg ctctgctcat gcactttcca aaaattcaaa acgctgattt cagtagcatc
 1260
 tctgtgccct cctagtgtat gtctgcgccg gatgcttttc cttttagcag tctcggcatt
 1320
 cactttgtga ttcctactc c
 1341

<210> 3340

<211> 86

<212> PRT

<213> Homo sapiens

<400> 3340

Met	Ser	Thr	Leu	Ala	Ser	Lys	Lys	Thr	Thr	Val	Thr	Arg	Ser	Ser	Asn
1				5				10					15		
Ser	Val	Asn	Ile	Phe	Leu	Tyr	Gln	Asn	Cys	Tyr	Tyr	Ala	Ala	Phe	Ile
		20					25					30			
Trp	Ala	Gly	Phe	Ile	Ile	Leu	His	Cys	Glu	Ile	Ala	Leu	Gln	Cys	Ile
		35					40					45			
Thr	Thr	Ala	Arg	Arg	Thr	Tyr	Ile	Tyr	Ile	Tyr	Ile	Lys	Asn	Ile	Ser
		50				55					60				
Asp	Ser	Cys	Ile	Gln	Met	Ser	Lys	Val	Phe	Val	Ala	Thr	Tyr	Tyr	Ile
65				70				75						80	
Ala	Tyr	Thr	Gln	Asn	His										
				85											

<210> 3341

<211> 1132

<212> DNA

<213> Homo sapiens

<400> 3341

ttttacagca caatatatgt gctctgctct cctcccgaag tctgctcca agagatctta
 60
 agctggaggc accaggtctg aattccagac tcctcccac caccacact tcacctcaa
 120

ctggagcatg accacagacc cattcagggga ggctggcgga ctcttcatcc tggacagtcc
 180
 cttactgtat gtcaagtaaa gctgagaatg aagcggagag catcagacag aggagctggg
 240
 gaaacgtcgg ccagggccaa ggctctagga agtgggattt ctggaaataa tgcaaagaga
 300
 gctggaccat tcatecttgg tccccgtctg ggcaactcac cggtgccaag catagtgcag
 360
 tgtttggcga ggaaagatgg cacggatgac ttctatcagc tgaagatcct gaccctggag
 420
 gagagggggg accaaggcat agagagccag gaagagcggc agggcaagat gctgctgcac
 480
 accgagtact cactgctgtc tctcctgcac acgcaggatg gcgtggtgca ccaccacggc
 540
 ctcttccagg accgcacctg tgaaatcggt gaggacacag aatccagccg gatgggtaag
 600
 aagatgaaga agcgcactct cctcgtcctg gactgcctct gtgctcatga cttcagcgat
 660
 aagaccgctg acctcatcaa cctgcagcac tacgtcatca aggagaagag gctcagcgag
 720
 agggagactg tggtaatctt ctacgacgtg gtccgcgtgg tggaggccct gcaccagaaa
 780
 aatatcgtgc acagagacct gaagctgggg aacatggtgc tcaacaagag gacacatcgg
 840
 ataaccatca ccaacttctg cctcggaag catctggtga gcgaggggga cctgctgaag
 900
 gaccagagag ggagccctgc ctacatcagt cccgacgtgc tcagcggccg gccgtaccgt
 960
 ggcaagccca gtgacatgtg ggccctgggc gtggtgctct tcacatgct gtatggccag
 1020
 ttcccccttct acgacagcat cccgcaggag ctcttccgca agatcaaggc tgccgagtat
 1080
 accattcctg aggatggacg ggtttctgag aacaccgtgt gtctcatccg ga
 1132

<210> 3342

<211> 308

<212> PRT

<213> Homo sapiens

<400> 3342

Met	Lys	Arg	Arg	Ala	Ser	Asp	Arg	Gly	Ala	Gly	Glu	Thr	Ser	Ala	Arg
1				5					10					15	
Ala	Lys	Ala	Leu	Gly	Ser	Gly	Ile	Ser	Gly	Asn	Asn	Ala	Lys	Arg	Ala
			20						25					30	
Gly	Pro	Phe	Ile	Leu	Gly	Pro	Arg	Leu	Gly	Asn	Ser	Pro	Val	Pro	Ser
			35					40					45		
Ile	Val	Gln	Cys	Leu	Ala	Arg	Lys	Asp	Gly	Thr	Asp	Asp	Phe	Tyr	Gln
			50				55				60				
Leu	Lys	Ile	Leu	Thr	Leu	Glu	Glu	Arg	Gly	Asp	Gln	Gly	Ile	Glu	Ser
65					70					75				80	
Gln	Glu	Glu	Arg	Gln	Gly	Lys	Met	Leu	Leu	His	Thr	Glu	Tyr	Ser	Leu
			85						90					95	
Leu	Ser	Leu	Leu	His	Thr	Gln	Asp	Gly	Val	Val	His	His	His	Gly	Leu

	100		105		110										
Phe	Gln	Asp	Arg	Thr	Cys	Glu	Ile	Val	Glu	Asp	Thr	Glu	Ser	Ser	Arg
	115						120					125			
Met	Val	Lys	Lys	Met	Lys	Lys	Arg	Ile	Cys	Leu	Val	Leu	Asp	Cys	Leu
	130						135					140			
Cys	Ala	His	Asp	Phe	Ser	Asp	Lys	Thr	Ala	Asp	Leu	Ile	Asn	Leu	Gln
145					150					155				160	
His	Tyr	Val	Ile	Lys	Glu	Lys	Arg	Leu	Ser	Glu	Arg	Glu	Thr	Val	Val
			165						170					175	
Ile	Phe	Tyr	Asp	Val	Val	Arg	Val	Val	Glu	Ala	Leu	His	Gln	Lys	Asn
			180					185					190		
Ile	Val	His	Arg	Asp	Leu	Lys	Leu	Gly	Asn	Met	Val	Leu	Asn	Lys	Arg
	195						200					205			
Thr	His	Arg	Ile	Thr	Ile	Thr	Asn	Phe	Cys	Leu	Gly	Lys	His	Leu	Val
	210					215					220				
Ser	Glu	Gly	Asp	Leu	Leu	Lys	Asp	Gln	Arg	Gly	Ser	Pro	Ala	Tyr	Ile
225					230					235				240	
Ser	Pro	Asp	Val	Leu	Ser	Gly	Arg	Pro	Tyr	Arg	Gly	Lys	Pro	Ser	Asp
			245						250					255	
Met	Trp	Ala	Leu	Gly	Val	Val	Leu	Phe	Thr	Met	Leu	Tyr	Gly	Gln	Phe
		260						265					270		
Pro	Phe	Tyr	Asp	Ser	Ile	Pro	Gln	Glu	Leu	Phe	Arg	Lys	Ile	Lys	Ala
	275						280					285			
Ala	Glu	Tyr	Thr	Ile	Pro	Glu	Asp	Gly	Arg	Val	Ser	Glu	Asn	Thr	Val
	290					295					300				
Cys	Leu	Ile	Arg												
305															

<210> 3343

<211> 594

<212> DNA

<213> Homo sapiens

<400> 3343

cgcgctcatga gccaccgcat ggaggggtgtc ggccagctgc ccgcctccta ccggcacaac
 60
 cggcctctcc tcagcggcgt gactgacacc gaggcgcgcc agccggggaa gtcgcccccc
 120
 ttcagcatga actgggtcgt gggcagcgcg gacctggaga ttatcaacgc caccactggg
 180
 cggaggagct gtggggggccc atcccggctc tgcaagcacg tgctgtctgc acggtgggcg
 240
 cggctgtatg gcaggctgag cacacggaca ccagccctg gagacacgcc ctccatgtac
 300
 tgtgaggcca agctgggggc gcacacctac cagtctgtga aacagcagct gttcaaggcc
 360
 tttcagaagg ctggcctggg cacctgggtg aggaaaccac cggagcagca gcagtttcta
 420
 ctgactctct aggctgcggg ctccctggctg ctggagctga gcgggacgct ggagggatgg
 480
 gaccgtgtct gggggggcgac gtggcgggtc ggccgggttc ctgcattcgt tttactttgg
 540
 tgtcccagaa acacgcgagt gtgcaatgtt tggacgagca acaaaaaaaaa aaaa
 594

<210> 3344
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 3344
 Arg Val Met Ser His Arg Met Glu Gly Val Gly Gln Leu Pro Ala Ser
 1 5 10 15
 Tyr Arg His Asn Arg Pro Leu Leu Ser Gly Val Ser Asp Thr Glu Ala
 20 25 30
 Arg Gln Pro Gly Lys Ser Pro Pro Phe Ser Met Asn Trp Val Val Gly
 35 40 45
 Ser Ala Asp Leu Glu Ile Ile Asn Ala Thr Thr Gly Arg Arg Ser Cys
 50 55 60
 Gly Gly Pro Ser Arg Leu Cys Lys His Val Leu Ser Ala Arg Trp Ala
 65 70 75 80
 Arg Leu Tyr Gly Arg Leu Ser Thr Arg Thr Pro Ser Pro Gly Asp Thr
 85 90 95
 Pro Ser Met Tyr Cys Glu Ala Lys Leu Gly Ala His Thr Tyr Gln Ser
 100 105 110
 Val Lys Gln Gln Leu Phe Lys Ala Phe Gln Lys Ala Gly Leu Gly Thr
 115 120 125
 Trp Val Arg Lys Pro Pro Glu Gln Gln Gln Phe Leu Leu Thr Leu
 130 135 140

<210> 3345
 <211> 1149
 <212> DNA
 <213> Homo sapiens

<400> 3345
 ggatcccata ggtagctcta gggctggagc tctgcaacat tgggcaagag gaccctgtgc
 60
 tgggaggcag ggagcttggg cccctcagat gggccacgtg cctcgtggg accctcattg
 120
 tcaccgtgag ctctttccaa ggggacgcca ccagtggggg cctgggcagg aggcagctga
 180
 ggtgtttcag gaaaaggctg aagatcaagg ctgtggtgtg aggactaccc actttaggga
 240
 agtgaaagag gccagcctca cccagacac ccagtggtg ttggggaaag ggggtggtcc
 300
 gtggtgagcc tggtacctg ggactcatcc tggccctgcc tggccctcag gtgggatgct
 360
 atggaatatg atgagaagct ggcccgtttc cggcaggccc acctcaaccc cttcaacaag
 420
 cagtctgggc cgagacagca tgagcagggc cctggggagg aggtcccgga cgtcactcct
 480
 gaagaggccc tgctgagct gccccctggg gagccggaat tccgctgccc tgaacgcgtg
 540
 atggatctcg gctgtctga ggaccacttc tcccgcctg tgggtctgtt cctggcctct
 600
 gacgtccagc agctgcgga ggcgatcgag gagtgcaggc aggtgattct ggagctgccc
 660

gagcagtcgg agaagcagaa ggatgccgtg gtgcgactca tccacctccg gctgaagctc
 720
 caggagctga aggaccccaa tgaggatgag ccaaacatcc gagtgctcct tgagcaccgc
 780
 ttttacaagg agaagagcaa gagcgtcaag cagacctgtg acaagtgtaa caccatcatc
 840
 tgggggctca ttcagacctg gtacacctgc acaggggtgtt attaccgctg tcacagtaag
 900
 tgcttgaacc tcattctccaa gccctgtgtg agctccaaag tcagccacca agctgaatac
 960
 gaactgaaca tctgccctga gacagggctg gacagccagg attaccgctg tgccgagtgc
 1020
 cgggcgcccc tctctctgcg ggggtgtgcc agtgaggcca ggcagtgcga ctataccggc
 1080
 cagtactact gcagccactg ccaactggaac gacctggctg tgatcccaga ggctggagtg
 1140
 tgctcgca
 1149

<210> 3346

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3346

Met	Glu	Tyr	Asp	Glu	Lys	Leu	Ala	Arg	Phe	Arg	Gln	Ala	His	Leu	Asn
1				5					10					15	
Pro	Phe	Asn	Lys	Gln	Ser	Gly	Pro	Arg	Gln	His	Glu	Gln	Gly	Pro	Gly
		20						25					30		
Glu	Glu	Val	Pro	Asp	Val	Thr	Pro	Glu	Glu	Ala	Leu	Pro	Glu	Leu	Pro
		35					40					45			
Pro	Gly	Glu	Pro	Glu	Phe	Arg	Cys	Pro	Glu	Arg	Val	Met	Asp	Leu	Gly
	50					55					60				
Leu	Ser	Glu	Asp	His	Phe	Ser	Arg	Pro	Val	Gly	Leu	Phe	Leu	Ala	Ser
65					70					75					80
Asp	Val	Gln	Gln	Leu	Arg	Gln	Ala	Ile	Glu	Glu	Cys	Lys	Gln	Val	Ile
			85						90					95	
Leu	Glu	Leu	Pro	Glu	Gln	Ser	Glu	Lys	Gln	Lys	Asp	Ala	Val	Val	Arg
		100						105					110		
Leu	Ile	His	Leu	Arg	Leu	Lys	Leu	Gln	Glu	Leu	Lys	Asp	Pro	Asn	Glu
	115						120					125			
Asp	Glu	Pro	Asn	Ile	Arg	Val	Leu	Leu	Glu	His	Arg	Phe	Tyr	Lys	Glu
	130					135					140				
Lys	Ser	Lys	Ser	Val	Lys	Gln	Thr	Cys	Asp	Lys	Cys	Asn	Thr	Ile	Ile
145					150					155					160
Trp	Gly	Leu	Ile	Gln	Thr	Trp	Tyr	Thr	Cys	Thr	Gly	Cys	Tyr	Tyr	Arg
			165						170					175	
Cys	His	Ser	Lys	Cys	Leu	Asn	Leu	Ile	Ser	Lys	Pro	Cys	Val	Ser	Ser
		180						185					190		
Lys	Val	Ser	His	Gln	Ala	Glu	Tyr	Glu	Leu	Asn	Ile	Cys	Pro	Glu	Thr
	195						200						205		
Gly	Leu	Asp	Ser	Gln	Asp	Tyr	Arg	Cys	Ala	Glu	Cys	Arg	Ala	Pro	Ile
	210					215					220				
Ser	Leu	Arg	Gly	Val	Pro	Ser	Glu	Ala	Arg	Gln	Cys	Asp	Tyr	Thr	Gly

225		230		235		240
Gln Tyr Tyr Cys Ser His Cys His Trp Asn Asp Leu Ala Val Ile Pro						
		245		250		255
Glu Ala Gly Val Cys Ser Arg						
	260					

<210> 3347

<211> 2267

<212> DNA

<213> Homo sapiens

<400> 3347

```

agggtgtgtaa cgtgcgctat ggagccgaaa gtcgcagagc tgaagcagaa gatcgaggac
60
acgctatgtc cttttggctt cgagggtttac cccttccagg tggcatggta caatgaactc
120
ttgcctccag ccttccacct accgctgcca ggacctaccc tggccttcct ggtactcagc
180
acgcctgcca tgtttgaccg ggccctcaag cccttcttgc agagctgcca cctccgaatg
240
ctgactgacc cagtggacca gtgtgtggcc taccatctgg gccgtgttgg agagagcctc
300
ccagagctgc agatagaaat cattgctgac tacgaggtac accccaaccg acgccccaaag
360
atcctggccc agacagcagc ccatgtagct ggggctgctt actactacca acgacaagat
420
gtggaggctg acccatgggg gaaccagcgc atatcagggtg tgtgcataca cccccgattt
480
gggggctggg ttgccatccg aggggtagtg ctgctgccag ggatagaggt gccagatctg
540
ccaccagaa aacctcatga ctgtgtacct acaagagctg accgtatcgc cctactcgaa
600
ggcttcaatt tccactggcg tgattggact taccgggatg ctgtgacacc ccaggagcgc
660
tactcagaag agcagaaggc ctacttctcc actccacctg cccaacgatt ggccctattg
720
ggcttggtc agccctcaga gaagcctagt tctccctccc cggaccttcc ctttaccaca
780
cccgcaccca agaagcctgg gaatcccagc agagcccgga gctggctcag cccaggggtc
840
tcaccacctg catcccttgg cccttgattt tctcccatgt ggacctgat ttatgggtgt
900
acttgctagg acttaattgg ctttggtcaa gcaaaagggt ttgagtacaa gattactatt
960
tttgataata tagtagagat cttccatgaa gataacaagg ctcaagggaag ttaggttttg
1020
ccaagataaa ggccagggaa ccagaattcc catctgcctt caaatgagtt tttttttttt
1080
ttttttttta gacagagtct tactctgtca cctaggctgg agtgagtgag cacagtctct
1140
actcactgca acctctgcct cctgggctga ggcagtagaa tcatttgaac cagggaggca
1200
gagattgcag tgagccgaga ttgcatggct gcactctagc ctgggtgaca gtgtgagact
1260

```

ctgtctcaaa agaaaaaaaa gtacctgcct caggtaggga ctgaataaac acgtgtaagg
 1320
 cactttggaa aaatacctgg catatatagt aagcagtatg ttggccatta cgaaaggccc
 1380
 tgggaattct gtactgctgc tcatgggtgt agtcggttct agaggggtgg gcaggtggga
 1440
 gtagctgagg aagacaagtg gctggaatgg tatcacatga tacacagaag taccctcagt
 1500
 tctgaatcta ccttggcctc aaggggccag gagaataact tttcccagct gacagcctct
 1560
 ctgaggacaa tgacatatga atgaggatca aaacgagctt tggccaggca ctgtggcgct
 1620
 cacctgtaat ccaccattt tgggaggctg aggcggagga ccacctgagg caaggaattc
 1680
 agaaccactc tgggcaacat aatgacacta aaaaagacta tctctaata aggctagaac
 1740
 caagggaagg ctaagaaagg ccaggtactg tgcaactact gaaagcccta cccaaggcca
 1800
 ccagccttgt cttcctcttt cctctgtcag ttcaaaaaga acagaaacct ccagctcttt
 1860
 tacatagcag gtaccaggca tttatcagaa gaggccaaagc ttctgggtcc catgcagccc
 1920
 tttgaatagt gtgtctaaac aaaaataggt gtccaagtag tcacactgag actttaactg
 1980
 gtaaccacc ctgtggcgct agtcgcagtg ctctggccaa cactatagca gggcttattc
 2040
 ttctccctca tgtgtagtga aacaaaatgt aacaccttgg gttcattcag ttccattccc
 2100
 tatgtctacc tgtgtcaata taattccctg atttggaggc agctctctc attttcccca
 2160
 aaacagggaa agcaaggagt aaattcctct taaaatcaaa agctaataat atgcttccta
 2220
 aaataaagac tcatcaaggt ctcaaaaaaa aaaaaaaaaa aaaaatt
 2267
 <210> 3348
 <211> 288
 <212> PRT
 <213> Homo sapiens

<400> 3348
 Arg Cys Val Thr Cys Ala Met Glu Pro Lys Val Ala Glu Leu Lys Gln
 1 5 10 15
 Lys Ile Glu Asp Thr Leu Cys Pro Phe Gly Phe Glu Val Tyr Pro Phe
 20 25 30
 Gln Val Ala Trp Tyr Asn Glu Leu Leu Pro Pro Ala Phe His Leu Pro
 35 40 45
 Leu Pro Gly Pro Thr Leu Ala Phe Leu Val Leu Ser Thr Pro Ala Met
 50 55 60
 Phe Asp Arg Ala Leu Lys Pro Phe Leu Gln Ser Cys His Leu Arg Met
 65 70 75 80
 Leu Thr Asp Pro Val Asp Gln Cys Val Ala Tyr His Leu Gly Arg Val
 85 90 95
 Gly Glu Ser Leu Pro Glu Leu Gln Ile Glu Ile Ile Ala Asp Tyr Glu
 100 105 110

Val His Pro Asn Arg Arg Pro Lys Ile Leu Ala Gln Thr Ala Ala His
 115 120 125
 Val Ala Gly Ala Ala Tyr Tyr Tyr Gln Arg Gln Asp Val Glu Ala Asp
 130 135 140
 Pro Trp Gly Asn Gln Arg Ile Ser Gly Val Cys Ile His Pro Arg Phe
 145 150 155 160
 Gly Gly Trp Phe Ala Ile Arg Gly Val Val Leu Leu Pro Gly Ile Glu
 165 170 175
 Val Pro Asp Leu Pro Pro Arg Lys Pro His Asp Cys Val Pro Thr Arg
 180 185 190
 Ala Asp Arg Ile Ala Leu Leu Glu Gly Phe Asn Phe His Trp Arg Asp
 195 200 205
 Trp Thr Tyr Arg Asp Ala Val Thr Pro Gln Glu Arg Tyr Ser Glu Glu
 210 215 220
 Gln Lys Ala Tyr Phe Ser Thr Pro Pro Ala Gln Arg Leu Ala Leu Leu
 225 230 235 240
 Gly Leu Ala Gln Pro Ser Glu Lys Pro Ser Ser Pro Ser Pro Asp Leu
 245 250 255
 Pro Phe Thr Thr Pro Ala Pro Lys Lys Pro Gly Asn Pro Ser Arg Ala
 260 265 270
 Arg Ser Trp Leu Ser Pro Arg Val Ser Pro Pro Ala Ser Pro Gly Pro
 275 280 285

<210> 3349

<211> 1132

<212> DNA

<213> Homo sapiens

<400> 3349

nnaaaatcgg ggcacggtca tcgtggagcg ctggtggaag gtaccgctgg ccggggaggg
 60
 ccggaagccg cgcctgcacc ggcgacatcg cgtctataag ctggtggagg acacgaagca
 120
 tcggcccaaa gaaaacctgg agctcatcct gacgcagtcg gtggagagta aggcccgggc
 180
 cgaggcgctt cctctcaggc tgatgttga gtccgggggtg acctggtctc agtgaagaaa
 240
 tctttaggcc ggaatcgact ccttcctcag ggactggctg tatatgcac cctgaaaac
 300
 aagaagctgt ttgaagagga gaaattgctg agacaagaag gaaaattaga gaagatccag
 360
 accaagcgag gtgaggcgac agtgaaattt ctaaaaagct gtcgcctgga ggtagggatg
 420
 aagaacaatg tcaaattgga gctgaaccct gaaatagttg cccgccactt ctttaagaat
 480
 cttggtgttg tgggtgcccc acatacatta aagttaccag cagagcctat cacacggtgg
 540
 ggcgagtatt ggtgtgaggt gacggtaaat gggcttgata ctgtgagagt gcctatgtct
 600
 gtcgtgaact ttgagaagcc caagacaaa agatataagt actggttagc ccagcaagct
 660
 gccaaaggta tggccccac cagccccag atctaaatct actctccctc caaggcagca
 720

aagcagaatc gggagcagtg gagcagaaat gtgcaagcac cctgatctca ctcccagctc
 780
 tgaccaaata cagaatttta gagaacatct gaagacatca gactgcactg cgtatacatg
 840
 ttgaattctt cttttttgcc atctttaact gtcactactg gggcagggaa gtcctgttcc
 900
 agaagtacca ggctgtagat ttgataagct agatgcagta gaccgaaacc atccaaaacc
 960
 tgttttagctt cttctcccat tggagtttat tgggacaaac aggagagcca gccattgtct
 1020
 ccagtacttg cctcattctc atcatccaaa ctgaacattt gtatcccaag cagaaataaa
 1080
 gagaatatgt tcttttttaa aaaaaaaaaa aaaaaaaaaa aaaaaaattg gc
 1132

<210> 3350

<211> 174

<212> PRT

<213> Homo sapiens

<400> 3350

Gly	Pro	Gly	Arg	Gly	Ala	Ser	Ser	Gln	Ala	Asp	Val	Gly	Val	Arg	Gly
1				5				10						15	
Asp	Leu	Val	Ser	Val	Lys	Lys	Ser	Leu	Gly	Arg	Asn	Arg	Leu	Leu	Pro
			20					25					30		
Gln	Gly	Leu	Ala	Val	Tyr	Ala	Ser	Pro	Glu	Asn	Lys	Lys	Leu	Phe	Glu
		35					40					45			
Glu	Glu	Lys	Leu	Leu	Arg	Gln	Glu	Gly	Lys	Leu	Glu	Lys	Ile	Gln	Thr
	50					55					60				
Lys	Ala	Gly	Glu	Ala	Thr	Val	Lys	Phe	Leu	Lys	Ser	Cys	Arg	Leu	Glu
65					70					75				80	
Val	Gly	Met	Lys	Asn	Val	Lys	Trp	Glu	Leu	Asn	Pro	Glu	Ile	Val	
			85					90					95		
Ala	Arg	His	Phe	Phe	Lys	Asn	Leu	Gly	Val	Val	Val	Ala	Pro	His	Thr
			100					105					110		
Leu	Lys	Leu	Pro	Ala	Glu	Pro	Ile	Thr	Arg	Trp	Gly	Glu	Tyr	Trp	Cys
		115					120					125			
Glu	Val	Thr	Val	Asn	Gly	Leu	Asp	Thr	Val	Arg	Val	Pro	Met	Ser	Val
	130				135						140				
Val	Asn	Phe	Glu	Lys	Pro	Lys	Thr	Lys	Arg	Tyr	Lys	Tyr	Trp	Leu	Ala
145					150					155				160	
Gln	Gln	Ala	Ala	Lys	Ala	Met	Ala	Pro	Thr	Ser	Pro	Gln	Ile		
				165					170						

<210> 3351

<211> 1422

<212> DNA

<213> Homo sapiens

<400> 3351

nnggaataca gaagagaaac tagaaatata cgtattttgt ttcacatttg aacagtcatt
 60
 cttgaggaat actccatacc tgagtagaca gccatgtggc catcgagct actaattttc
 120

atgatgctct tagctccaat aattcatggt ggcaagcaca gtgaacgaca tcctgccctc
 180
 gctgctgcgc cgcgatgcgc tgagcgccgc caaggagggtg ttgtaccacc tggacatcta
 240
 cttcagcagc cagctgcaga gcgcgccgct gcccatcgtg gacaagggcc ccgtggagct
 300
 gctggaggag ttcgtgttcc aggtgccc aa ggagcgcagc gcgcagccca agagactgaa
 360
 ttcccttcag gagcttcaac ttcttgaaat catgtgcaat tatttccagg agcaaacc aa
 420
 ggactctgtt cggcagatta ttttttcac ccttttcagc cctcaaggga acaaagccga
 480
 tgacagccgg atgagcttgt tgggaaaact ggtctccatg gcggtggctg tgtgtcgaat
 540
 cccggtgttg gagtgtgctg cctcctggct tcagcggacg cccgtggttt actgtgtgag
 600
 gttagccaag gcccttgtag atgactactg ctgtttggtg ccgggatcca ttcagacgct
 660
 gaagcagata ttcagtgcc a gcccgagatt ctgctgccag ttcacacact ccgttaccgc
 720
 gctctatgac ctgtcatcag atgacctcat tccacctatg gacttgcttg aaatgattgt
 780
 cacctggatt tttgaggacc caaggttgat tctcatcact tttttaaata ctccgattgc
 840
 ggccaatctg ccaataggat tcttagagct caccgccgctc gttggattga tccgctgggtg
 900
 cgtgaaggca cccctggctt ataaaaggaa aaagaagccc cccttatcca atggccatgt
 960
 cagcaacaag gtcacaaagg acccgggcgt ggggatggac agagactccc acctcttgta
 1020
 ctcaaaactc cacctcagcg tcctgcaagt gctcatgacg ctgcagctgc acctgaccga
 1080
 gaagaatctg tatgggcgcc tggggctgat cctcttcgac cacatgggtcc cgctggtaga
 1140
 ggagatcaac aggttggcgg atgaactgaa cccctcaac gcctcccagg agattgagct
 1200
 ctgcgtggac cggttggcgc aggtctctga ggtggccatg gcctcaggag ctctgctgtg
 1260
 cagcagagat gaccttagaa ccttgttctc caggtcctcc cgtaataacc tcctccagct
 1320
 ggtgatctcg ggtcccgtgc agcagtcgcc tcacgccgcg ctccccccgg ggttctaccc
 1380
 ccacatccac acgccccgc tgggctacgg ggctgtcccc cc
 1422

<210> 3352

<211> 97

<212> PRT

<213> Homo sapiens

<400> 3352

Met Trp Pro Ser Gln Leu Leu Ile Phe Met Met Leu Leu Ala Pro Ile
 1 5 10 15
 Ile His Gly Gly Lys His Ser Glu Arg His Pro Ala Leu Ala Ala Ala


```

      20      25      30
Pro Arg Cys Ala Glu Arg Arg Gln Gly Gly Val Val Pro Pro Gly His
      35      40      45
Leu Leu Gln Gln Pro Ala Ala Glu Arg Ala Ala Ala His Arg Gly Gln
      50      55      60
Gly Pro Arg Gly Ala Ala Gly Gly Val Arg Val Pro Gly Ala Gln Gly
65      70      75      80
Ala Gln Arg Ala Ala Gln Glu Thr Glu Phe Pro Ser Gly Ala Ser Thr
      85      90      95
Ser

```

<210> 3353
 <211> 420
 <212> DNA
 <213> Homo sapiens

```

<400> 3353
nngaagctat cctcatcctc ttcccgacct cggtcctgtg aagtccttgg aattaacatc
60
tttccatctc ctgaccagcc tgccaatgtg cctgtcctcc cacctgccat gaacacgggg
120
ggctccctac ctgacctcac caacctgcac tttccccac cactgcccac cccctggac
180
cctgaagaga cagcctaccc tagcctgagt gggggcaaca gtacctcaa tttgaccac
240
accatgactc acctgggcat cagcaggggc atgggcctgg gcccaggcta tgatgcacca
300
gggcgtcccc ctggatacca gtaaactgtc cactgaccag cggttacccc catacccata
360
cagttcccca agtttggtnt ctgcttacct agccccacac cccaaagttt taacagcagc
420

```

<210> 3354
 <211> 107
 <212> PRT
 <213> Homo sapiens

```

<400> 3354
Xaa Lys Leu Ser Ser Ser Ser Arg Pro Arg Ser Cys Glu Val Pro
1      5      10      15
Gly Ile Asn Ile Phe Pro Ser Pro Asp Gln Pro Ala Asn Val Pro Val
      20      25      30
Leu Pro Pro Ala Met Asn Thr Gly Gly Ser Leu Pro Asp Leu Thr Asn
      35      40      45
Leu His Phe Pro Pro Pro Leu Pro Thr Pro Leu Asp Pro Glu Glu Thr
      50      55      60
Ala Tyr Pro Ser Leu Ser Gly Gly Asn Ser Thr Ser Asn Leu Thr His
65      70      75      80
Thr Met Thr His Leu Gly Ile Ser Arg Gly Met Gly Leu Gly Pro Gly
      85      90      95
Tyr Asp Ala Pro Gly Arg Pro Pro Gly Tyr Gln
      100      105

```

<210> 3355
 <211> 474
 <212> DNA
 <213> Homo sapiens

<400> 3355
 gaacagccag ttgaacctga tggccccctt cctggctcag acaataacca agaaaagaaa
 60
 gtaagattat ctccagccaa aatgtcaacc aagaattcta cagatctagt tgaatatgtt
 120
 gacaagagtc atgcttttct ccccatcatt ccaaacaccc agagaggtca gctagaagac
 180
 agactgaaca accaggcgcg taccatagct ttccttcttg aacaagcctt ccgcatcaag
 240
 gaggacatct ctgcttgctt gcagggggacc catggctttc gaaaagagga atcgctcgcc
 300
 aggaagttac tggaaagcca catccagacc atcaccagca tcgtcaaaaa actcagccaa
 360
 aatattgaga ttttagaaga ccaaataaga gctcgagatc aggcggccac aggaactaac
 420
 tttgcagtac acgagataaa catcaaacac ctacaaggag ttgggagatc tttc
 474

<210> 3356
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 3356
 Met Ser Thr Lys Asn Ser Thr Asp Leu Val Glu Tyr Val Asp Lys Ser
 1 5 10 15
 His Ala Phe Leu Pro Ile Ile Pro Asn Thr Gln Arg Gly Gln Leu Glu
 20 25 30
 Asp Arg Leu Asn Asn Gln Ala Arg Thr Ile Ala Phe Leu Leu Glu Gln
 35 40 45
 Ala Phe Arg Ile Lys Glu Asp Ile Ser Ala Cys Leu Gln Gly Thr His
 50 55 60
 Gly Phe Arg Lys Glu Glu Ser Leu Ala Arg Lys Leu Leu Glu Ser His
 65 70 75 80
 Ile Gln Thr Ile Thr Ser Ile Val Lys Lys Leu Ser Gln Asn Ile Glu
 85 90 95
 Ile Leu Glu Asp Gln Ile Arg Ala Arg Asp Gln Ala Ala Thr Gly Thr
 100 105 110
 Asn Phe Ala Val His Glu Ile Asn Ile Lys His Leu Gln Gly Val Gly
 115 120 125
 Arg Ser Phe
 130

<210> 3357
 <211> 2268
 <212> DNA
 <213> Homo sapiens

<400> 3357

nnggagcccc tgggtctgatt ggtcctcacc atgataaccc tccacaacag gtactccagc
 60
 agcagccatt atggatttgg atgtgctctt tatacccatg tctctaattg cagatggagg
 120
 agggcctata aaaataattc cttcttgctt acaaagttca gcaaattcca tgttttctga
 180
 aagaaaaccg catcctggat ggatagcctg tgcagcagag gtcttggtcca cttgaatgat
 240
 tttctccata gataggtagc tctgctggga ggaacgggtt tggcgtgtgg gacgcagctg
 300
 cctctgtact ggggagtcac ggagtggccg ggctccaggg acatggcggc ggctctgctg
 360
 gtgtcgggtgc tgctgggtggc ggcggagagg aaccgggtggc atcgtctccc gagcctgctc
 420
 ctgccgccga ggacatgggt gtggaggcaa agaaccatga agtacacaac agccacagga
 480
 agaaacatta ccaaggtgat cattgcaaac agaggagaaa ttgcctgcag ggtgatgcgc
 540
 acagccaaaa aactgggtgt acagactgtg gcggtttata gtgaggctga cagaaattcc
 600
 atgcatgtag atatggcaga tgaagcatat tccatcggcc ccgctccctc ccagcagagc
 660
 tacctatcta tggagaaaat cattcaagtg gccaaagacct ctgctgcaca ggctatccat
 720
 ccaggatgctg gttttctttc agaaaacatg gaatttgctg aactttgtaa gcaagaagga
 780
 attattttta taggcctctc tccatctgca attagagaca tgggtataaa gagcacatcc
 840
 aaatccataa tggctgctgc tggagtacct gttgtggagg gttatcatgg tgaggaccaa
 900
 tcagaccagt gcctgaagga acacgccagg agaattggct atcctgtcat gattaaagcc
 960
 gtccgggggtg gaggaggaaa aggaatgagg attgttagat cagaacaaga atttcaagaa
 1020
 cagttagagt cagcacggag agaagctaag aagtctttca atgatgatgc tatgctgatc
 1080
 gagaagtttg tagacacacc gaggcattga gaagtccagg tgtttggtga tcaccatggc
 1140
 aatgctgtgt acttgtttga aagagactgt agtgtgcaga ggcgacatca gaagatcatt
 1200
 gaggaggccc cagcgcttgg tattaaatct gaagtaagaa aaaagctggg agaagctgca
 1260
 gtcagagctg ctaaagctgt aaattatgtt ggagcagggg ctgtggagtt tattatggac
 1320
 tcaaaacata atttctgttt catggagatg aatacaaggc tgcaagtgga acatcctgtt
 1380
 actgagatga tcacaggaac tgacttggtg gagtggcagc ttagaattgc agcaggagag
 1440
 aagattcctt tgagccagga agaaataact ctgcagggcc atgccttcga agctagaata
 1500
 tatgcagaag atcctagcaa taacttcatt cctgtggcag gccattagt gcacctctct
 1560
 actcctcgag cagacccttc caccaggatt gaaactggag tacggcaagg agacgaagtt
 1620

tccgtgcatt atgaccccat gattgcgaag ctggctcgtgt gggcagcaga tcgccaggcg
 1680
 gcattgacaa aactgaggta cagccttcgt cagtacaata ttgttggaact gcacaccaac
 1740
 attgacttct tactcaacct gtctggccac ccagagtttg aagctgggaa cgtgcacact
 1800
 gatttcatcc ctcaacacca caaacagttg ttgctcagtc ggaaggctgc agccaaagag
 1860
 tctttatgcc aggcagccct gggctctatc ctcaaggaga aagccatgac cgacactttc
 1920
 actcttcagg cacatgatca attctctcca ttttcgtcta gcagtgggaag aagactgaat
 1980
 atctcgtata ccagaaacat gactcttaaa gatggtaaaa acagttttcg tctcctcgga
 2040
 taatcaacca tttccatact catgtaatct aggcatactc tggagttatt acaggtttgg
 2100
 ttccagacca ctacaataaa atgtagccat agctgtaacg tataaccatg atgggtctta
 2160
 tagcatgcag attgaagata aaactttcca agtccttggt aatctttaca gcgagggaga
 2220
 ctgcacttac ctgaaatggt ctgttaatgg agttgctagt aaagcgaa
 2268

<210> 3358

<211> 493

<212> PRT

<213> Homo sapiens

<400> 3358

Gln	Thr	Val	Ala	Val	Tyr	Ser	Glu	Ala	Asp	Arg	Asn	Ser	Met	His	Val
1				5					10					15	
Asp	Met	Ala	Asp	Glu	Ala	Tyr	Ser	Ile	Gly	Pro	Ala	Pro	Ser	Gln	Gln
		20						25					30		
Ser	Tyr	Leu	Ser	Met	Glu	Lys	Ile	Ile	Gln	Val	Ala	Lys	Thr	Ser	Ala
		35					40					45			
Ala	Gln	Ala	Ile	His	Pro	Gly	Cys	Gly	Phe	Leu	Ser	Glu	Asn	Met	Glu
	50					55				60					
Phe	Ala	Glu	Leu	Cys	Lys	Gln	Glu	Gly	Ile	Ile	Phe	Ile	Gly	Pro	Pro
65					70				75					80	
Pro	Ser	Ala	Ile	Arg	Asp	Met	Gly	Ile	Lys	Ser	Thr	Ser	Lys	Ser	Ile
			85					90					95		
Met	Ala	Ala	Ala	Gly	Val	Pro	Val	Val	Glu	Gly	Tyr	His	Gly	Glu	Asp
			100					105					110		
Gln	Ser	Asp	Gln	Cys	Leu	Lys	Glu	His	Ala	Arg	Arg	Ile	Gly	Tyr	Pro
		115					120					125			
Val	Met	Ile	Lys	Ala	Val	Arg	Gly	Gly	Gly	Gly	Lys	Gly	Met	Arg	Ile
	130					135					140				
Val	Arg	Ser	Glu	Gln	Glu	Phe	Gln	Glu	Gln	Leu	Glu	Ser	Ala	Arg	Arg
145					150					155				160	
Glu	Ala	Lys	Lys	Ser	Phe	Asn	Asp	Asp	Ala	Met	Leu	Ile	Glu	Lys	Phe
			165					170					175		
Val	Asp	Thr	Pro	Arg	His	Val	Glu	Val	Gln	Val	Phe	Gly	Asp	His	His
			180				185						190		
Gly	Asn	Ala	Val	Tyr	Leu	Phe	Glu	Arg	Asp	Cys	Ser	Val	Gln	Arg	Arg

```

      195              200              205
His Gln Lys Ile Ile Glu Glu Ala Pro Ala Pro Gly Ile Lys Ser Glu
  210              215              220
Val Arg Lys Lys Leu Gly Glu Ala Ala Val Arg Ala Ala Lys Ala Val
  225              230              235              240
Asn Tyr Val Gly Ala Gly Thr Val Glu Phe Ile Met Asp Ser Lys His
      245              250              255
Asn Phe Cys Phe Met Glu Met Asn Thr Arg Leu Gln Val Glu His Pro
      260              265              270
Val Thr Glu Met Ile Thr Gly Thr Asp Leu Val Glu Trp Gln Leu Arg
      275              280              285
Ile Ala Ala Gly Glu Lys Ile Pro Leu Ser Gln Glu Glu Ile Thr Leu
      290              295              300
Gln Gly His Ala Phe Glu Ala Arg Ile Tyr Ala Glu Asp Pro Ser Asn
  305              310              315              320
Asn Phe Met Pro Val Ala Gly Pro Leu Val His Leu Ser Thr Pro Arg
      325              330              335
Ala Asp Pro Ser Thr Arg Ile Glu Thr Gly Val Arg Gln Gly Asp Glu
      340              345              350
Val Ser Val His Tyr Asp Pro Met Ile Ala Lys Leu Val Val Trp Ala
      355              360              365
Ala Asp Arg Gln Ala Ala Leu Thr Lys Leu Arg Tyr Ser Leu Arg Gln
      370              375              380
Tyr Asn Ile Val Gly Leu His Thr Asn Ile Asp Phe Leu Leu Asn Leu
  385              390              395              400
Ser Gly His Pro Glu Phe Glu Ala Gly Asn Val His Thr Asp Phe Ile
      405              410              415
Pro Gln His His Lys Gln Leu Leu Leu Ser Arg Lys Ala Ala Lys
      420              425              430
Glu Ser Leu Cys Gln Ala Ala Leu Gly Leu Ile Leu Lys Glu Lys Ala
      435              440              445
Met Thr Asp Thr Phe Thr Leu Gln Ala His Asp Gln Phe Ser Pro Phe
      450              455              460
Ser Ser Ser Ser Gly Arg Arg Leu Asn Ile Ser Tyr Thr Arg Asn Met
  465              470              475              480
Thr Leu Lys Asp Gly Lys Asn Ser Phe Arg Leu Leu Gly
      485              490

```

<210> 3359

<211> 652

<212> DNA

<213> Homo sapiens

<400> 3359

```

ntccggacgt aatcgtggtt tttgttctgc aataggcggc ttagagggag gggctttttc
60
gcctatacct actgtagctt ctccacgtat ggaccctaaa ggctactgct gctactacgg
120
ggctagacag ttactgtctc agctctagga tgtgcgttct tccactagaa gctcttctga
180
gggaggtaat taaaaaacag tggaatggaa aaacagtgcg gtagtcatcc tgtaatatgc
240
tccttgtaa caatgtatac attcctgcta ggtgccatat tcattgcttt aagctcaagt
300

```

cgcatcttac tagtgaagta ttctgccaat gaagaaaaca agtatgatta tcttccaact
 360
 actgtgaatg tgtgctcaga actggtgaag ctagttttct gtgtgcttgt gtcattctgt
 420
 gttataaaga aagatcatca aagtagaaat ttgaaatatg cttctctggaa ggaattctct
 480
 gatttcatga agtgggtccat tcttgccctt ctttatttcc tggataactt gattgtcttc
 540
 tatgtcctgt cctatcttca accagccatg gctgttatct tctcaaattt tagcattata
 600
 acaacagctc ttctattcag gatagtgtg aagaggcgctc taaactggat cc
 652

<210> 3360

<211> 149

<212> PRT

<213> Homo sapiens

<400> 3360

Met	Glu	Lys	Gln	Cys	Cys	Ser	His	Pro	Val	Ile	Cys	Ser	Leu	Ser	Thr
1				5					10					15	
Met	Tyr	Thr	Phe	Leu	Leu	Gly	Ala	Ile	Phe	Ile	Ala	Leu	Ser	Ser	Ser
			20					25					30		
Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn	Lys	Tyr	Asp
		35				40						45			
Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu	Val	Lys	Leu	Val
	50					55					60				
Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys	Lys	Asp	His	Gln	Ser
65					70					75				80	
Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu	Phe	Ser	Asp	Phe	Met	Lys
			85					90						95	
Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe	Leu	Asp	Asn	Leu	Ile	Val	Phe
			100					105					110		
Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro	Ala	Met	Ala	Val	Ile	Phe	Ser	Asn
		115				120						125			
Phe	Ser	Ile	Ile	Thr	Thr	Ala	Leu	Leu	Phe	Arg	Ile	Val	Leu	Lys	Arg
	130					135					140				
Arg	Leu	Asn	Trp	Ile											
145															

<210> 3361

<211> 1040

<212> DNA

<213> Homo sapiens

<400> 3361

nntccggatg gtctggcgcg ctgggctcgc taggtttgtg ctggcgaggg gacgggggtgg
 60
 gacgggagac ccggacccaa gaagtgggag gaccgcgcgt gtcgcggcct agcggcgagg
 120
 ggagtcgcct gcgcgcgcag cggaggccag tgcgccggcg catagcgagc ccgggtctgt
 180
 gatcgccgag gcgggagtg agatagtcca agtcctaaga gacagcgcct ctctcattca
 240

gtctttgatt atacatcagc atcaccagct ccctcaccac caatgcgacc atgggagatg
 300
 acatcaaata ggcagccccc ttcagttcga ccaagccaac atcacttctc aggggaacga
 360
 tgcaacacac ctgcacgcaa cagaagaagt cctcctgtca ggcgccagag aggaagaagg
 420
 gatcgtctgt ctgcacataa ttccattagt caagatgaaa actatcacca tctcccttac
 480
 gcacagcagc aagcaataga ggagcctcga gccttccacc ctccgaatgt atctccccgt
 540
 ctgctacatc ctgctgctca tccacccag cagaatgcag tcatgggtga catacatgat
 600
 cagctccatc aaggaacagt ccctgtttct tacacagtaa caacagtggc accacatggg
 660
 attccactct gcacaggcca gcacatccct gctttagta cacagcaggt cccaggatgc
 720
 tctgtggttt tcagtggaca gcacccctct gtctgtagtg tgccctctcc aatgcttcag
 780
 gcatgttcag ttcagcactt accagtacca tatgctgcat tcccaccct tatttctagt
 840
 gatccatttc ttatacatcc tctcacctt tctcccatc atcctctca tttgccacca
 900
 ccaggccagt ttgtcccttt ccaaacacag caatcacgat cgcctctgca aaggatagaa
 960
 aatgaagtgg aactcttagg agaacatctt ccaggagccc acccccagca ccccatctg
 1020
 ttaataaata tctcaactcc
 1040

<210> 3362

<211> 252

<212> PRT

<213> Homo sapiens

<400> 3362

Met	Arg	Pro	Trp	Glu	Met	Thr	Ser	Asn	Arg	Gln	Pro	Pro	Ser	Val	Arg
1				5					10					15	
Pro	Ser	Gln	His	His	Phe	Ser	Gly	Glu	Arg	Cys	Asn	Thr	Pro	Ala	Arg
			20					25					30		
Asn	Arg	Arg	Ser	Pro	Pro	Val	Arg	Arg	Gln	Arg	Gly	Arg	Arg	Asp	Arg
			35				40					45			
Leu	Ser	Arg	His	Asn	Ser	Ile	Ser	Gln	Asp	Glu	Asn	Tyr	His	His	Leu
			50			55					60				
Pro	Tyr	Ala	Gln	Gln	Gln	Ala	Ile	Glu	Glu	Pro	Arg	Ala	Phe	His	Pro
65					70				75					80	
Pro	Asn	Val	Ser	Pro	Arg	Leu	Leu	His	Pro	Ala	Ala	His	Pro	Pro	Gln
				85				90					95		
Gln	Asn	Ala	Val	Met	Val	Asp	Ile	His	Asp	Gln	Leu	His	Gln	Gly	Thr
			100				105						110		
Val	Pro	Val	Ser	Tyr	Thr	Val	Thr	Val	Ala	Pro	His	Gly	Ile	Pro	
			115			120					125				
Leu	Cys	Thr	Gly	Gln	His	Ile	Pro	Ala	Cys	Ser	Thr	Gln	Gln	Val	Pro
			130			135					140				
Gly	Cys	Ser	Val	Val	Phe	Ser	Gly	Gln	His	Leu	Pro	Val	Cys	Ser	Val

```

145          150          155          160
Pro Pro Pro Met Leu Gln Ala Cys Ser Val Gln His Leu Pro Val Pro
          165          170          175
Tyr Ala Ala Phe Pro Pro Leu Ile Ser Ser Asp Pro Phe Leu Ile His
          180          185          190
Pro Pro His Leu Ser Pro His His Pro Pro His Leu Pro Pro Pro Gly
          195          200          205
Gln Phe Val Pro Phe Gln Thr Gln Gln Ser Arg Ser Pro Leu Gln Arg
          210          215          220
Ile Glu Asn Glu Val Glu Leu Leu Gly Glu His Leu Pro Gly Ala His
225          230          235          240
Pro Gln His Pro His Leu Leu Ile Asn Ile Ser Thr
          245          250

```

<210> 3363
 <211> 718
 <212> DNA
 <213> Homo sapiens

```

<400> 3363
cagaaggacc ccaggatggc ggtcatcatg cccaggaacg ttggtgatgg ggaatgggtt
60
ggccagcatg atcagggacc ccgtcatgcc catgattttt tgggtggcat tggcgaccga
120
gtagctcagg agtgtctccg gagccactg gagaagcccc ccaacggcct cctcttcccc
180
cagcacgggg actatcagta cggccgcaac aacatctaaa cagaccactt ccaatacage
240
cggcagagct acccaaactc gtacagtttg aaccgctatg atgtgtagag tccaaaggac
300
aggaccagac tgttggtgac tccttccccg gccccacag cagtatcaga aacttctgac
360
aatcagtga tgtacaacc agccgagggg acggtgcata actctccatc agaagccctg
420
gggttccttg cccccgtga gccgcaggag gatgcgttgc ctgcagtga gacggccgtg
480
agctctgggc aaacctaaac agagaccagt gtcccatgct ctttcttctt ggagcctgtc
540
atctgagggc cgtgtccctg cggagatctt ggccacgttg tacctttcca tgtggaatta
600
ttccccaaag agtgtagctc agagcacttg tgtctgcatt ccagataaca ttcaggacct
660
gtgtgaaaag ctgggggtcac tgtggctgta gaccatgaac tggcagtggg ggtgtcca
718

```

<210> 3364
 <211> 163
 <212> PRT
 <213> Homo sapiens

```

<400> 3364
Met Gly His Trp Ser Leu Phe Arg Phe Ala Gln Ser Ser Arg Pro Ser
1          5          10          15
Ala Leu Gln Ala Thr His Pro Pro Ala Ala His Gly Gly Pro Gly Thr

```


20							25				30				
Pro	Gly	Leu	Leu	Met	Glu	Ser	Tyr	Ala	Pro	Ser	Pro	Arg	Leu	Gly	Cys
35							40				45				
Thr	Phe	Thr	Asp	Cys	Gln	Lys	Phe	Leu	Ile	Leu	Leu	Trp	Gly	Pro	Gly
50							55				60				
Lys	Glu	Ser	Pro	Thr	Val	Trp	Ser	Cys	Pro	Leu	Asp	Ser	Thr	His	His
65							70				75				
Ser	Gly	Ser	Asn	Cys	Thr	Ser	Leu	Gly	Ser	Ser	Ala	Gly	Cys	Ile	Gly
85							90				95				
Ser	Gly	Leu	Phe	Arg	Cys	Cys	Cys	Gly	Arg	Thr	Asp	Ser	Pro	Arg	Ala
100							105				110				
Gly	Gly	Arg	Gly	Gly	Arg	Trp	Gly	Ala	Ser	Pro	Val	Gly	Ser	Gly	Asp
115							120				125				
Thr	Pro	Glu	Leu	Leu	Gly	Arg	Gln	Cys	His	Pro	Lys	Asn	His	Gly	His
130							135				140				
Asp	Gly	Val	Pro	Asp	His	Ala	Gly	Gln	Pro	Ile	Pro	His	His	Gln	Arg
145							150				155				
Ser	Trp	Ala													

<210> 3365

<211> 2389

<212> DNA

<213> Homo sapiens

<400> 3365

60	gcaggaagat	ggcggcggta	gcggaggtgt	gagtggacgc	gggactcagc	ggccggattt
120	tctcttccct	tcttttccct	tttccttccc	tatttgaaat	tggcatcgag	ggggctaagt
180	tcgggtggca	gcgcgcggcg	caacgcaggg	gtcacggcga	cggcggcggc	ggctgacggc
240	tggaagggta	ggcttccttc	accgctcgtc	ctccttcttc	gctccgctcg	gtgtcaggcg
300	cggcggcggc	gcggcggggc	gacttcgtcc	ctcctctctg	tccccccac	accggagcgg
360	gcactcttcg	cttcgccatc	ccccgaccct	tcaccccgag	gactgggcgc	ctcctccggc
420	gcagctgagg	gagcgggggc	cggctctcctg	ctcggttgtc	gagcctccat	gtcggataat
480	cagaactgga	actcgtcggg	ctcggaggag	gatccagaga	cggagctctgg	gccgcctgtg
540	gagcgtcgcg	gggtcctcag	taagtggaca	aactacattc	atgggtggca	ggatcgttgg
600	gtagttttga	aaaataatgc	tctgagttac	tacaaatctg	aagatgaaac	agagtatggc
660	tgcagaggat	ccatctgtct	tagcaaggct	gtcatcacac	ctcacgattt	tgatgaatgt
720	cgatttgata	ttagtgtaaa	tgatagtgtt	tggtatcttc	gtgctcagga	tccagatcat
780	agacagcaat	ggatagatgc	cattgaacag	cacaagactg	aatctggata	tggatctgaa
840	tccagcttgc	gtcgacatgg	ctcaatggtg	tccctgggtg	ctggagcaag	tggctactct

gcaacatcca cctcttcatt caagaaaggg cacagtttac gtgagaagtt ggctgaaatg
900
gaaacattta gagacatctt atgtagacaa gttgacacgc tacagaagta ctttgatgcc
960
tgtgtgatg ctgtctctaa ggatgaactt caaagggata aagtggtaga agatgatgaa
1020
gatgactttc ctacaacgcg ttctgatggg gacttcttgc atagtaccaa cggcaataaa
1080
gaaaagttat ttccacatgt gacacaaaaa ggaattaatg gtatagactt taaaggggaa
1140
gcgataactt ttaaagcaac tactgctgga atccttgcaa cactttctca ttgtattgaa
1200
ctaattggta aacgtgagga cagctggcag aagagactgg ataaggaaa tgagaagaaa
1260
agaagaacag aggaagcata taaaaatgca atgacagaac ttaagaaaa atcccacttt
1320
ggaggaccag attatgagga aggcctaac agtctgatta atgaagaaga gttctttgat
1380
gctgttgaag ctgctcttga cagacaagat aaaatagaag aacagtcaca gagtgaaaag
1440
gtgagattac attggcctac atccttgccc tctggagatg ccttttcttc tgtggggaca
1500
catagatttg tccaaaagcc ctatagtgcg tcttctcca tgtcttccat tgatctagtc
1560
agtgcctctg atgatgttca cagattcagc tcccagggtg aagagatggg gcagaaccac
1620
atgacttact cattacagga tgtaggcgga gatgccaat ggagttggg tgtagaagaa
1680
ggagaaatga aggtatacag aagagaagta gaagaaaatg ggattgttct ggatccttta
1740
aaagctaccc atgcagttaa aggcgtcaca ggacatgaag tctgcaatta tttctggaat
1800
gttgacgttc gcaatgactg ggaaacaact atagaaaact ttcattgtggg ggaaacatta
1860
gctgataatg caatcatcat ttatcaaaca cacaagaggg tgtggcctgc ttctcagcga
1920
gacgtattat atctttctgt cattcgaaag ataccagcct tgactgaaaa tgaccctgaa
1980
acttgatag tttgtaattt ttctgtggat catgacagtg ctctctaaa caaccgatgt
2040
gtccgtgcc aataaaatgt tgctatgatt tgtcaaacct tggtaagccc accagagggg
2100
aaccaggaaa ttagcaggga caacattcta tgcaagatta catatgtagc taatgtgaac
2160
cctggaggat gggcaccagc ctcatgttta agggcagtgg caaagcgaga gtatcctaaa
2220
tttctaaaac gttttacttc ttacgtccaa gaaaaaactg caggaaagcc tattttgttc
2280
tagtattaac aggtactaga agatatgttt tatctttttt taactttatt tgactaatat
2340
gactgtcaat actaaaattt agttgttgaa agtatttact atgtttttt
2389

<210> 3366

<211> 624

<212> PRT

<213> Homo sapiens

<400> 3366

```

Met Ser Asp Asn Gln Asn Trp Asn Ser Ser Gly Ser Glu Glu Asp Pro
 1           5           10           15
Glu Thr Glu Ser Gly Pro Pro Val Glu Arg Cys Gly Val Leu Ser Lys
      20           25           30
Trp Thr Asn Tyr Ile His Gly Trp Gln Asp Arg Trp Val Val Leu Lys
      35           40           45
Asn Asn Ala Leu Ser Tyr Tyr Lys Ser Glu Asp Glu Thr Glu Tyr Gly
      50           55           60
Cys Arg Gly Ser Ile Cys Leu Ser Lys Ala Val Ile Thr Pro His Asp
65           70           75           80
Phe Asp Glu Cys Arg Phe Asp Ile Ser Val Asn Asp Ser Val Trp Tyr
      85           90           95
Leu Arg Ala Gln Asp Pro Asp His Arg Gln Gln Trp Ile Asp Ala Ile
      100          105          110
Glu Gln His Lys Thr Glu Ser Gly Tyr Gly Ser Glu Ser Ser Leu Arg
      115          120          125
Arg His Gly Ser Met Val Ser Leu Val Ser Gly Ala Ser Gly Tyr Ser
      130          135          140
Ala Thr Ser Thr Ser Ser Phe Lys Lys Gly His Ser Leu Arg Glu Lys
145          150          155          160
Leu Ala Glu Met Glu Thr Phe Arg Asp Ile Leu Cys Arg Gln Val Asp
      165          170          175
Thr Leu Gln Lys Tyr Phe Asp Ala Cys Ala Asp Ala Val Ser Lys Asp
      180          185          190
Glu Leu Gln Arg Asp Lys Val Val Glu Asp Asp Glu Asp Asp Phe Pro
      195          200          205
Thr Thr Arg Ser Asp Gly Asp Phe Leu His Ser Thr Asn Gly Asn Lys
      210          215          220
Glu Lys Leu Phe Pro His Val Thr Pro Lys Gly Ile Asn Gly Ile Asp
225          230          235          240
Phe Lys Gly Glu Ala Ile Thr Phe Lys Ala Thr Thr Ala Gly Ile Leu
      245          250          255
Ala Thr Leu Ser His Cys Ile Glu Leu Met Val Lys Arg Glu Asp Ser
      260          265          270
Trp Gln Lys Arg Leu Asp Lys Glu Thr Glu Lys Lys Arg Arg Thr Glu
      275          280          285
Glu Ala Tyr Lys Asn Ala Met Thr Glu Leu Lys Lys Lys Ser His Phe
      290          295          300
Gly Gly Pro Asp Tyr Glu Glu Gly Pro Asn Ser Leu Ile Asn Glu Glu
305          310          315          320
Glu Phe Phe Asp Ala Val Glu Ala Ala Leu Asp Arg Gln Asp Lys Ile
      325          330          335
Glu Glu Gln Ser Gln Ser Glu Lys Val Arg Leu His Trp Pro Thr Ser
      340          345          350
Leu Pro Ser Gly Asp Ala Phe Ser Ser Val Gly Thr His Arg Phe Val
      355          360          365
Gln Lys Pro Tyr Ser Arg Ser Ser Ser Met Ser Ser Ile Asp Leu Val
      370          375          380
Ser Ala Ser Asp Asp Val His Arg Phe Ser Ser Gln Val Glu Glu Met

```

385		390		395		400									
Val	Gln	Asn	His	Met	Thr	Tyr	Ser	Leu	Gln	Asp	Val	Gly	Gly	Asp	Ala
				405					410					415	
Asn	Trp	Gln	Leu	Val	Val	Glu	Glu	Gly	Glu	Met	Lys	Val	Tyr	Arg	Arg
			420					425						430	
Glu	Val	Glu	Glu	Asn	Gly	Ile	Val	Leu	Asp	Pro	Leu	Lys	Ala	Thr	His
		435					440						445		
Ala	Val	Lys	Gly	Val	Thr	Gly	His	Glu	Val	Cys	Asn	Tyr	Phe	Trp	Asn
	450					455					460				
Val	Asp	Val	Arg	Asn	Asp	Trp	Glu	Thr	Thr	Ile	Glu	Asn	Phe	His	Val
465					470					475					480
Val	Glu	Thr	Leu	Ala	Asp	Asn	Ala	Ile	Ile	Ile	Tyr	Gln	Thr	His	Lys
			485					490						495	
Arg	Val	Trp	Pro	Ala	Ser	Gln	Arg	Asp	Val	Leu	Tyr	Leu	Ser	Val	Ile
		500						505					510		
Arg	Lys	Ile	Pro	Ala	Leu	Thr	Glu	Asn	Asp	Pro	Glu	Thr	Trp	Ile	Val
	515						520					525			
Cys	Asn	Phe	Ser	Val	Asp	His	Asp	Ser	Ala	Pro	Leu	Asn	Asn	Arg	Cys
	530					535					540				
Val	Arg	Ala	Lys	Ile	Asn	Val	Ala	Met	Ile	Cys	Gln	Thr	Leu	Val	Ser
545					550					555					560
Pro	Pro	Glu	Gly	Asn	Gln	Glu	Ile	Ser	Arg	Asp	Asn	Ile	Leu	Cys	Lys
			565					570						575	
Ile	Thr	Tyr	Val	Ala	Asn	Val	Asn	Pro	Gly	Gly	Trp	Ala	Pro	Ala	Ser
		580						585					590		
Val	Leu	Arg	Ala	Val	Ala	Lys	Arg	Glu	Tyr	Pro	Lys	Phe	Leu	Lys	Arg
	595					600						605			
Phe	Thr	Ser	Tyr	Val	Gln	Glu	Lys	Thr	Ala	Gly	Lys	Pro	Ile	Leu	Phe
	610					615					620				

<210> 3367

<211> 366

<212> DNA

<213> Homo sapiens

<400> 3367

```

acgcgtgcag gagaggagag gccaggagat agggagggca gtttgtggat tgaaatgacc
60
gagaattacg ccacagaggt gttggaggct ggcacgtgg catctcagga gcacggaggg
120
tgccttcccc acttcaggcc tcttagtgct aaggatgtga gaggcaaggg ctgctgggag
180
agtattttac ggactgaagg aggcgtgccg cctgccctgc cctcctactg gtggaggaag
240
gaggtgctgg gagccccaca actcagggcc ccccgacgcc cagtaaggcc actgtacacc
300
cctcctgacc cagaccataa ccagcctccg attgtgcttt tgaccctggt tccttcaggc
360
accagg
366

```

<210> 3368

<211> 104

<212> PRT

<213> Homo sapiens

<400> 3368

```

Met Thr Glu Asn Tyr Ala Thr Glu Val Leu Glu Ala Gly Ile Val Ala
 1             5             10             15
Ser Gln Glu His Gly Gly Cys Leu Pro His Phe Arg Pro Leu Ser Val
      20             25             30
Lys Asp Val Arg Gly Lys Gly Cys Trp Glu Ser Ile Leu Arg Thr Glu
      35             40             45
Gly Gly Val Pro Pro Ala Leu Pro Ser Tyr Trp Trp Arg Lys Glu Val
      50             55             60
Leu Gly Ala Pro Gln Leu Arg Ala Pro Arg Arg Pro Val Arg Pro Leu
65             70             75             80
Tyr Thr Pro Pro Asp Pro Asp His Asn Gln Pro Pro Ile Val Leu Leu
      85             90             95
Thr Leu Phe Pro Ser Gly Thr Arg
      100

```

<210> 3369

<211> 1405

<212> DNA

<213> Homo sapiens

<400> 3369

```

cttgttccag ggaaaagctt tcagcagcaa agggaagcca tgaaacaaac catagaagaa
60
gataaggagc agaaaaatca ggaaaactgt ggtgcaaaga agaataaaaa gaagaggaaa
120
aaggttttat ataatgccaa taaaaatgat gattatgaca acgaggagat cttaacctat
180
gaggaaatgt cactttatca tcagccagca aataggaaga gacctatcat cttgattggt
240
ccacagaact gtggccagaa tgaattgctg cagaggctca tgaacaaaga aaaggaccgc
300
tttgcatctg cagttctca tacaaccgg agtaggcgag accaagaagt agccggtaga
360
gattaccact ttgtttcgcg gcaagcattc gaggcagaca tagcagctgg aaagttcatt
420
gagcatggtg aatttgagaa gaatttgtat ggaactagca tagattctgt acggcaagtg
480
atcaactctg gcaaaatatg tcttttaagt cttcgtaaac agtcattgaa gactctccgg
540
aattcagatt tgaaaccata tattatcttc attgcacccc cttcacaaga aagacttcgg
600
gcattattgg ccaaagaagg caagaatcca aagcctgaag agttgagaga aatcattgag
660
aagacaagag agatggagca gaacaatggc cactactttg atacggcaat tgtgaattcc
720
gatcttgata aagcctatca ggaattgctt aggttaatta acaaacttga tactgaacct
780
cagtgggtac catccacttg gctgaggtga aagaaacatc cattctgtgg catgttggac
840
ttgatctggc aaaaactgcc aataggagga ctgcccagaca ctgcagcaag attgaggata
900

```

agatggaagg cagcagtata agctgtagat ctgttcttag atctcttgaa ttagtgagac
 960
 gacagttccc ttaggcagtt tgtgcatggc atcctttatt ctctatacat ggctttagcg
 1020
 gttcttgccct cattttggga ttctaaatgg aagctttcaa cagagcattc cattttgtcc
 1080
 tgttaaaacc ttttgttttc acctaaaccc tttctgctta gttgtatctc tgtgaaaaac
 1140
 ttgtatacac aagcgcccat gtctcacaca aatattgatg tgattattct taagtgttaa
 1200
 atcattaaca cttaaagac ttcatggga atattgagca gagggactgt gcttctatgc
 1260
 actgggcaag gcagtatttg cttaggaaac taatttagtc atcagagata ctttctctaa
 1320
 aaggaaaaat aaaaaacaaa atgggtgccac ttggggttga agctactttg ttaggcttga
 1380
 attcatttat atgtcttttg attct
 1405

<210> 3370

<211> 269

<212> PRT

<213> Homo sapiens

<400> 3370

Leu	Val	Pro	Gly	Lys	Ser	Phe	Gln	Gln	Gln	Arg	Glu	Ala	Met	Lys	Gln
1				5					10					15	
Thr	Ile	Glu	Glu	Asp	Lys	Glu	Gln	Lys	Asn	Gln	Glu	Asn	Cys	Gly	Ala
		20						25					30		
Lys	Lys	Asn	Lys	Lys	Lys	Arg	Lys	Lys	Val	Leu	Tyr	Asn	Ala	Asn	Lys
		35					40					45			
Asn	Asp	Asp	Tyr	Asp	Asn	Glu	Glu	Ile	Leu	Thr	Tyr	Glu	Glu	Met	Ser
	50					55				60					
Leu	Tyr	His	Gln	Pro	Ala	Asn	Arg	Lys	Arg	Pro	Ile	Ile	Leu	Ile	Gly
65					70					75				80	
Pro	Gln	Asn	Cys	Gly	Gln	Asn	Glu	Leu	Arg	Gln	Arg	Leu	Met	Asn	Lys
			85					90						95	
Glu	Lys	Asp	Arg	Phe	Ala	Ser	Ala	Val	Pro	His	Thr	Thr	Arg	Ser	Arg
		100						105					110		
Arg	Asp	Gln	Glu	Val	Ala	Gly	Arg	Asp	Tyr	His	Phe	Val	Ser	Arg	Gln
		115					120					125			
Ala	Phe	Glu	Ala	Asp	Ile	Ala	Ala	Gly	Lys	Phe	Ile	Glu	His	Gly	Glu
		130				135						140			
Phe	Glu	Lys	Asn	Leu	Tyr	Gly	Thr	Ser	Ile	Asp	Ser	Val	Arg	Gln	Val
145					150					155				160	
Ile	Asn	Ser	Gly	Lys	Ile	Cys	Leu	Leu	Ser	Leu	Arg	Thr	Gln	Ser	Leu
			165					170						175	
Lys	Thr	Leu	Arg	Asn	Ser	Asp	Leu	Lys	Pro	Tyr	Ile	Ile	Phe	Ile	Ala
		180						185					190		
Pro	Pro	Ser	Gln	Glu	Arg	Leu	Arg	Ala	Leu	Leu	Ala	Lys	Glu	Gly	Lys
		195					200					205			
Asn	Pro	Lys	Pro	Glu	Glu	Leu	Arg	Glu	Ile	Ile	Glu	Lys	Thr	Arg	Glu
	210					215					220				
Met	Glu	Gln	Asn	Asn	Gly	His	Tyr	Phe	Asp	Thr	Ala	Ile	Val	Asn	Ser

225		230		235		240									
Asp	Leu	Asp	Lys	Ala	Tyr	Gln	Glu	Leu	Leu	Arg	Leu	Ile	Asn	Lys	Leu
			245						250					255	
Asp	Thr	Glu	Pro	Gln	Trp	Val	Pro	Ser	Thr	Trp	Leu	Arg			
			260						265						

<210> 3371

<211> 790

<212> DNA

<213> Homo sapiens

<400> 3371

```

nnacgcgtag ccacaagacc gggtcggttt ctggttgccg tccccgcagg tgacgctgca
60
gacagaccag agactccagt caccctcgcc atctgtggaa tcatattctg gctgatcttt
120
ggttttcaaaa gtccggtggc ctggggctgt atgggtccac cccctggggg ggttgaggaa
180
gttgctgtcg tctgaggtac tgccgtacgt gtagtcctgg tccccgcttt tgccctggcc
240
aaagaagcac caagggagca tctggaccac caggctgcac accaaccctt cccagaccg
300
cgattccgac aagagacggg gcacccttca ttgcaaagag atttccccag atcctttctc
360
cttgatctac caaactttcc agatctttcc aaagctgata tcaatgggca gaatccaaat
420
atccagggtca ccatagaggt ggtcgacggt cctgactctg aagcagataa agatcagcat
480
ccggagaata agcccagctg gtcagtccca tccccgact ggcgggctg gtggcagagg
540
tccctgtcct tggccagggc aaacagcggg gaccaggact acaagtacga cagtacctca
600
gacgacagca acttctctca cccccccagg ggggtgggacc atacagcccc aggccaccg
660
acttttgaaa ccaaagatca gccagaatat gattccacag atggcgaggg tgactggagt
720
ctctgggtctg tctgcagcgt cacctgcggg aacggcaacc agaaacggac ccggtcttgt
780
ggctacgcgt
790

```

<210> 3372

<211> 198

<212> PRT

<213> Homo sapiens

<400> 3372

Gly	Thr	Ala	Val	Arg	Val	Val	Leu	Val	Pro	Ala	Phe	Ala	Leu	Ala	Lys
1				5					10					15	
Glu	Ala	Pro	Arg	Glu	His	Leu	Asp	His	Gln	Ala	Ala	His	Gln	Pro	Phe
			20					25					30		
Pro	Arg	Pro	Arg	Phe	Arg	Gln	Glu	Thr	Gly	His	Pro	Ser	Leu	Gln	Arg
			35				40					45			
Asp	Phe	Pro	Arg	Ser	Phe	Leu	Leu	Asp	Leu	Pro	Asn	Phe	Pro	Asp	Leu

50	55	60
Ser Lys Ala Asp Ile Asn Gly Gln Asn Pro Asn Ile Gln Val Thr Ile		
65	70	75
Glu Val Val Asp Gly Pro Asp Ser Glu Ala Asp Lys Asp Gln His Pro		80
	85	90
Glu Asn Lys Pro Ser Trp Ser Val Pro Ser Pro Asp Trp Arg Ala Trp		95
	100	105
Trp Gln Arg Ser Leu Ser Leu Ala Arg Ala Asn Ser Gly Asp Gln Asp		110
	115	120
Tyr Lys Tyr Asp Ser Thr Ser Asp Asp Ser Asn Phe Leu Asn Pro Pro		125
	130	135
Arg Gly Trp Asp His Thr Ala Pro Gly His Arg Thr Phe Glu Thr Lys		140
	145	150
Asp Gln Pro Glu Tyr Asp Ser Thr Asp Gly Glu Gly Asp Trp Ser Leu		155
	160	165
Trp Ser Val Cys Ser Val Thr Cys Gly Asn Gly Asn Gln Lys Arg Thr		170
	175	180
Arg Ser Cys Gly Tyr Ala	185	190
195		

<210> 3373

<211> 726

<212> DNA

<213> Homo sapiens

<400> 3373

tgtacatggt ttctctgggc tgacaggggc cctgcccctg gggcactgag ccctccctgt
 60
 gggtcctcga acagaagcca gggctctgtgc ggcacccacc agctgctggg ccatggcgga
 120
 gtgttctggt gcgggccagc gcctgaccgg tgcgggcggc ctcaggagag gagagcttgc
 180
 tcagtgcgtc acgtagtcag ggctcaggct ggggcccggc tccagagcct gggtcacattc
 240
 ccaagcttca ttctcttcac ctgtgaattg caggcttccc tgggtgtgcc tgcacatgag
 300
 ggaagacaca cctgaagcac tgggtccctc catggccttg ggccgcagga accgtgggcg
 360
 cagagcttg ggaaggacat gtcggaggcc ggcgcctgtg cgggcagaag ctgtgtcctc
 420
 cagcccttcc accaccagca tggtctcatt tccaggtttc tctgtttaaa aaacaaaagt
 480
 agcgcacatcgg tggctcttcac gacgtacacc cagaagcacc cgtccatcga ggacgggcct
 540
 ccgtttgtgg agccgctgct taacttcac tggttcctgc tgctggctgt ggacgggtgc
 600
 gtcttgggat cctgcagggg gagggggctg tgaatgtgcg ggttgtgtgt agacgtgggt
 660
 tggatagctg tgtgggtgtg tgtgcaagt tagccatggt gtgggtagcc gtgtgggtat
 720
 atgcat
 726

<210> 3374

<211> 84

<212> PRT

<213> Homo sapiens

<400> 3374

```

Met Ser Glu Ala Gly Ala Cys Ala Gly Arg Ser Cys Val Leu Gln Pro
 1           5           10           15
Phe His His Gln His Val Leu Ile Ser Arg Phe Leu Cys Leu Lys Asn
          20           25           30
Lys Ser Ser Ala Ser Val Val Phe Thr Thr Tyr Thr Gln Lys His Pro
          35           40           45
Ser Ile Glu Asp Gly Pro Pro Phe Val Glu Pro Leu Leu Asn Phe Ile
          50           55           60
Trp Phe Leu Leu Leu Ala Val Asp Gly Cys Val Leu Gly Ser Cys Arg
65           70           75           80
Gly Arg Gly Leu

```

<210> 3375

<211> 393

<212> DNA

<213> Homo sapiens

<400> 3375

```

acgcgtgcat acgtgatctc atgtttgcac acatgtgtcc atgcagatgc atgctctcac
60
gcacatgtgc ccacacactc agcactcaca ccccgctctg caggctcagc cccactcctg
120
agccacctgc ctgggctttg ggggccagc cggcattggg agccccaggc tccagctggc
180
ctcgtttggc tctgaaatct aggccaggat gcagagcccg cagtgcggcc agtggagccc
240
ctgggtactgt ggcagagccc cacctggcag ccccttttcc tgtcaaagcc cctcccagcg
300
tcctctcccc accaggcaag ctaccgctt gaggettagg acgttgcgcc ctctgtgtc
360
cttggccagc atccccggcc tgcattctac cag
393

```

<210> 3376

<211> 103

<212> PRT

<213> Homo sapiens

<400> 3376

```

Met Phe Ala His Met Cys Pro Cys Arg Cys Met Leu Ser Arg Thr Cys
 1           5           10           15
Ala His Thr Leu Ser Thr His Thr Pro Ser Cys Arg Leu Ser Pro Thr
          20           25           30
Pro Glu Pro Pro Ala Trp Ala Leu Gly Ala Gln Pro Ala Trp Gly Ala
          35           40           45
Pro Gly Ser Ser Trp Pro Arg Leu Ala Leu Lys Ser Arg Pro Gly Cys
          50           55           60
Arg Ala Arg Ser Ala Ala Ser Gly Ala Pro Gly Thr Val Arg Ser Pro

```

```

65          70          75          80
His Leu Ala Ala Pro Phe Pro Val Lys Ala Pro Pro Ser Val Leu Ser
          85          90          95
Pro Pro Gly Lys Leu Pro Ala
          100

```

```
<210> 3377
<211> 5235
<212> DNA
<213> Homo sapiens
```

```

<400> 3377
ngtcgacatc ttggtctccg gtcttggggc tgtttaagaa tcttggcatc acgtgtggcg
60
aggacatggc tgatcagttt tctgacagaa gtgggtaaat ttccgcgttg gtaaatttcc
120
tgacaggaaa ttccggggaa ctaaaaaggc tggaagaaca tgaagatgga gcagtcataa
180
accaccact caaggaccat ctccctcacg accatccaca cgagactcag attgtctgaa
240
ttgagctatc gcaacttaat gctaaaagct ccttaaagct acagatttat gacatagttc
300
cttccaaaat attacatcat aaatcattga gaagattaaa aaaaaacact tgaagaaatt
360
gtagttttta acatctctgc atatattttg gatagctact aggttacttt aactgtcatt
420
aaggagcaca gacttactga agctttactg gacagaatcc tgggaaatcg atatcattat
480
aaggttatat ttcccagtta gcgggtgaag ggctggagac cttattgcag tcatggcttt
540
cacaaattac agcagtctga atcgagctca gctaaccttt gaatatctgc acacaaattc
600
gtaagtatcc tctaggtgcc actgaggtaa ccagtaactc gttccttgat atttatatgga
660
aatcgtttcc ccagaaaatt ttgctttttc actttttgag atgtatccca ctggagtga
720
atgtgtcact ggatatcttg agctctgtat tgaagaactg agatcagtga aatacttggt
780
gctaataccag aagaatctga tttttgttta ttggatcaaa attttctaaa tgcaaaacttt
840
agttatttga agtcaatatg ttgagttggt tcattcaagt gtttatagga atccaacaaa
900
tactgtctta ttggatcgcc aaatgttgga ctattttagt atcaaccggt tcccctctgt
960
agtgacaacg tcctaaacag ttaggtttat aacaagtgtt tactttctaa caagaaaaca
1020
gaagacattt aaatgacaac tttcaagaag aaaattttta ttttttcaga agttggcatt
1080
atcttctctg cagattgctc acatccaata ttatttgtat atgctaataa ggaaacggca
1140
acttgtttat atctctattt agatagtctt tccccaaaat ttccacagaa acatacagtg
1200
tcatgggttc ttgagttcat gaaggagtaa tctaatactt ccaacatggt ctggaatggt
1260

```

tcagggtttaa tccatatgcc cactctcttg gaggctgtcc agtagcgtca aaacttttagt
1320
gttttaatac attcacctgt tactttttgag atgaagttca cctttcttgg atcacatgca
1380
aaggatgttt aggtctgtga agaaaagaat ttctaggccg ggtgctgtgg ctcacgcctg
1440
taatcccagc actttgggag gccgagaacc actcacgaat tcttgtttgg tgctcttgct
1500
gaactgggtg ataatgcaag agatgctgat gccaccagaa tagatattta tgcagaaaga
1560
cgagaggacc ttcgaggagg atttatgctt tgctttttgg atgatggagc aggaatggat
1620
ccaagtgatg ctgccagtgt gatccagttt gggaagtcgg ccaagcgaac acctgagtct
1680
actcagattg ggcagtacgg gaatgggtta aaatcgggct caatgcgcat tgggaaggat
1740
ttatctctgt tcaccaagaa ggcagacacc atgacctgcc tcttctgtgc tcgcacgttt
1800
catgaggaag aaggcattga tgaagtgata gtccactgc ccacctggaa tgctcggacc
1860
cggaacctg tcacagacaa tgtagagaaa ttgccattg agacagaact catctataag
1920
tactctccat tccgactga ggaggaagtg atgaccagc ttatgaagat tctggggac
1980
agcgaacat tggatgatcat cttcaatctc aaactcatgg ataatggaga gccagaacta
2040
gacataatct caaatccaag agatatccag atggcagaga cgtcccaga gggcacgaag
2100
ccagagcggc gctcgttccg tgcctatgcc gctgtgctct atattgatcc ccggatgagg
2160
atcttcatcc atgggcacaa ggtgcagacc aagaggctct cctgctgcct gtacaagccc
2220
aggatgtaca agtacacgtc aagccgtttc aagaccctg cgagcagga ggtgaggata
2280
gcagtgcacg tagcaaggat tgctgaagag aaggcgcggg aggcagagag caaagctcgg
2340
acattagaag tacgcctagg tggagacctc acgcgggact ccagggtgat gttgcgacag
2400
gtccagaaca gagccatcac tctgcgcaga gaagccgatg tcaagaagag gatcaaggag
2460
gccaagcagc gagcacttaa agaacctaa gaactgaatt ttgtttttgg tgtcaacatt
2520
gaacaccggg atctggatgg catgttcac tacaactgta gccgactgat caaatgtat
2580
gagaaagtgg gccacagct ggaagggggc atggcatgtg gcggggtgt tggggtgtt
2640
gatgtgccct acctggtcct ggagcctaca cacaacaaac aggactttgc tgatgccaa
2700
gagtaccggc acctgctccg agcaatgggg gagcacctgg cgcagtattg gaaggatatt
2760
gccatcgccc agaggggaat catcaagttc tgggatgagt ttggctacct ctctgccaac
2820
tggaaccagc ccccgctccag tgagctgcgt tacaacgcc ggagagctat ggaaatcccc
2880

accaccatcc agtgcgattt gtgtctgaaa tggagaaccc tccccttcca gctgagttct
2940
gtggaaaaag attaccctga cacctgggtt tgctccatga accctgatcc tgaacaggac
3000
cgggtgtgagg cttctgaaca aaagcagaag gttccccctgg gaacattcag aaaggacatg
3060
aagacgcagg aagagaagca gaaacaactg acagagaaaa ttcgccagca gcaggagaag
3120
ctggaggccc ttcagaaaac cacacccatc cgctcccaag cagacctgaa gaaattgccc
3180
ttggaagtga ccaccagacc ttccactgag gaacctgtgc gtagacctca gcgtcctcgg
3240
tcgccccctt tacctgctgt gatcaggaac gccccagca gacccccctt tttgccaaact
3300
cctagaccag ccagccagcc ccgaaaggct cctgtcatca gcagtacccc aaagctccct
3360
gctttggcag cccgggagga ggccagcaca tctaggctgc tccagccacc tgaggcacc
3420
cgaaagcctg ccaacactct cgtcaagact gcatcccgac ctgccccctt ggtgcagcaa
3480
ctgtcaccat ctttactgcc caactccaag agccctcggg aggttccttc tcccaaagtc
3540
atcaagactc cagtgggtgaa gaagacagag tcacccatca aactctcccc ggctaccct
3600
agtccgaagc ggagtgtcgc agtttctgat gaggaagaag ttgaggagga agctgagagg
3660
aggaaggaga ggtgcaagcg gggcagattt gttgtgaagg aggaaaagaa ggactcgaat
3720
gagctctcag acagtgtcgg gggagaggac tcggctgacc tcaagagagc tcagaaagat
3780
aaagggctgc acgtggaggt gcgtgtgaac agggagtggg acacgggccg tgtcacagcc
3840
gtggaggtgg gcaagcatgt ggtgcggtgg aagggtgaagt ttgactacgt gccacagac
3900
acgacaccaa gagaccgctg ggtggagaaa ggcagtgagg atgtgcggct gatgaaaccc
3960
ccttctccgg aacatcagag ccttgatata caacaggagg gcggggagga ggaggtggg
4020
cctgtggccc agcaggccat agctgtcgca gagccctcca cttccgaatg cctccgcatt
4080
gagcctgaca cactgcctt gagcaccaat cacgagacca tcgacctgct tgtccagatc
4140
ctccggaatt gtttacggta cttcctgcct ccaagtttcc ccatctccaa gaagcagctg
4200
agtgtctatga attcagatga gctaatatct tttcctctga aggagtactt caagcaatat
4260
gaagtagggc tccaaaacct gtgcaattcc taccagagcc gtgctgactc ccgggccaag
4320
gcctccgagg aaagcctgcg cacctccgag aggaagctcc gcgagacgga ggagaagctg
4380
cagaagctga ggaccaacat cgtggcactc ctgcaaaaagg tgcaggagga catagacatc
4440
aacacagatg atgagctgga cgcctacatt gaggacctca tcaccaaggg ggactgaagg
4500

caggagagag agcagctccc ctgcccacct gcccctcaac cctgtagctg cagggggagg
 4560
 ggacttcatt catgggttgg tggtcgcacc ttggtttgac ttacacggga catttggtt
 4620
 ttggaggaa aagataccct gattctttga atcttcctta agtttataaa tatttatttt
 4680
 ttaaaagaag atgctgtgcc tgtgagacca tacttttttt tttttttttt tttttttttt
 4740
 ttttttttgg tgactgcaaa ggacagagaa cctttccact ttggccatac tgggttgcta
 4800
 agccggagcc atttcagctc ctggctcctc aagataacgg cgagtccagt gccatcttgg
 4860
 agaagctcca ggggcagggc tgacttttct cctacaggag gaacaatgtg gggatctgag
 4920
 ggatgggagg gagacttccc cctagagtgg tggctctgct gggggctcat atccagggag
 4980
 ccaaaagggg ggctgtgtag gaggttccac attggagggg ctctctctct cgcagctgtc
 5040
 agagttggtc ctggctgtgg cgtccaaaca gcttgagggg aaaagatcct gtctaaccac
 5100
 ctcactact actcaagttc tttctgaagg agggatttct tcagttaacc atggacagtg
 5160
 aggtttctca ccacagtaac ttgggtccag gttgaggggg agacagatct gtggtaaate
 5220
 tctgacttgg gcagc
 5235

<210> 3378

<211> 970

<212> PRT

<213> Homo sapiens

<400> 3378

Met	Leu	Cys	Phe	Leu	Asp	Asp	Gly	Ala	Gly	Met	Asp	Pro	Ser	Asp	Ala
1				5					10					15	
Ala	Ser	Val	Ile	Gln	Phe	Gly	Lys	Ser	Ala	Lys	Arg	Thr	Pro	Glu	Ser
			20					25					30		
Thr	Gln	Ile	Gly	Gln	Tyr	Gly	Asn	Gly	Leu	Lys	Ser	Gly	Ser	Met	Arg
		35					40					45			
Ile	Gly	Lys	Asp	Phe	Ile	Leu	Phe	Thr	Lys	Lys	Glu	Asp	Thr	Met	Thr
		50				55					60				
Cys	Leu	Phe	Leu	Ser	Arg	Thr	Phe	His	Glu	Glu	Glu	Gly	Ile	Asp	Glu
65				70					75					80	
Val	Ile	Val	Pro	Leu	Pro	Thr	Trp	Asn	Ala	Arg	Thr	Arg	Glu	Pro	Val
			85					90					95		
Thr	Asp	Asn	Val	Glu	Lys	Phe	Ala	Ile	Glu	Thr	Glu	Leu	Ile	Tyr	Lys
		100					105					110			
Tyr	Ser	Pro	Phe	Arg	Thr	Glu	Glu	Glu	Val	Met	Thr	Gln	Phe	Met	Lys
		115				120					125				
Ile	Pro	Gly	Asp	Ser	Gly	Thr	Leu	Val	Ile	Ile	Phe	Asn	Leu	Lys	Leu
		130				135					140				
Met	Asp	Asn	Gly	Glu	Pro	Glu	Leu	Asp	Ile	Ile	Ser	Asn	Pro	Arg	Asp
145				150				155						160	
Ile	Gln	Met	Ala	Glu	Thr	Ser	Pro	Glu	Gly	Thr	Lys	Pro	Glu	Arg	Arg

					165					170					175	
Ser	Phe	Arg	Ala	Tyr	Ala	Ala	Val	Leu	Tyr	Ile	Asp	Pro	Arg	Met	Arg	
			180					185					190			
Ile	Phe	Ile	His	Gly	His	Lys	Val	Gln	Thr	Lys	Arg	Leu	Ser	Cys	Cys	
		195					200					205				
Leu	Tyr	Lys	Pro	Arg	Met	Tyr	Lys	Tyr	Thr	Ser	Ser	Arg	Phe	Lys	Thr	
	210					215					220					
Arg	Ala	Glu	Gln	Glu	Val	Arg	Ile	Ala	Val	His	Val	Ala	Arg	Ile	Ala	
225					230					235					240	
Glu	Glu	Lys	Ala	Arg	Glu	Ala	Glu	Ser	Lys	Ala	Arg	Thr	Leu	Glu	Val	
				245					250					255		
Arg	Leu	Gly	Gly	Asp	Leu	Thr	Arg	Asp	Ser	Arg	Val	Met	Leu	Arg	Gln	
			260					265					270			
Val	Gln	Asn	Arg	Ala	Ile	Thr	Leu	Arg	Arg	Glu	Ala	Asp	Val	Lys	Lys	
		275					280					285				
Arg	Ile	Lys	Glu	Ala	Lys	Gln	Arg	Ala	Leu	Lys	Glu	Pro	Lys	Glu	Leu	
	290					295					300					
Asn	Phe	Val	Phe	Gly	Val	Asn	Ile	Glu	His	Arg	Asp	Leu	Asp	Gly	Met	
305					310					315					320	
Phe	Ile	Tyr	Asn	Cys	Ser	Arg	Leu	Ile	Lys	Met	Tyr	Glu	Lys	Val	Gly	
			325						330					335		
Pro	Gln	Leu	Glu	Gly	Gly	Met	Ala	Cys	Gly	Gly	Val	Val	Gly	Val	Val	
			340					345					350			
Asp	Val	Pro	Tyr	Leu	Val	Leu	Glu	Pro	Thr	His	Asn	Lys	Gln	Asp	Phe	
		355					360					365				
Ala	Asp	Ala	Lys	Glu	Tyr	Arg	His	Leu	Leu	Arg	Ala	Met	Gly	Glu	His	
	370					375					380					
Leu	Ala	Gln	Tyr	Trp	Lys	Asp	Ile	Ala	Ile	Ala	Gln	Arg	Gly	Ile	Ile	
385					390					395					400	
Lys	Phe	Trp	Asp	Glu	Phe	Gly	Tyr	Leu	Ser	Ala	Asn	Trp	Asn	Gln	Pro	
			405						410					415		
Pro	Ser	Ser	Glu	Leu	Arg	Tyr	Lys	Arg	Arg	Arg	Ala	Met	Glu	Ile	Pro	
			420					425					430			
Thr	Thr	Ile	Gln	Cys	Asp	Leu	Cys	Leu	Lys	Trp	Arg	Thr	Leu	Pro	Phe	
		435					440					445				
Gln	Leu	Ser	Ser	Val	Glu	Lys	Asp	Tyr	Pro	Asp	Thr	Trp	Val	Cys	Ser	
	450					455					460					
Met	Asn	Pro	Asp	Pro	Glu	Gln	Asp	Arg	Cys	Glu	Ala	Ser	Glu	Gln	Lys	
465					470					475					480	
Gln	Lys	Val	Pro	Leu	Gly	Thr	Phe	Arg	Lys	Asp	Met	Lys	Thr	Gln	Glu	
			485						490					495		

```

      595              600              605
Pro Glu Ala Pro Arg Lys Pro Ala Asn Thr Leu Val Lys Thr Ala Ser
  610              615              620
Arg Pro Ala Pro Leu Val Gln Gln Leu Ser Pro Ser Leu Leu Pro Asn
625              630              635              640
Ser Lys Ser Pro Arg Glu Val Pro Ser Pro Lys Val Ile Lys Thr Pro
      645              650              655
Val Val Lys Lys Thr Glu Ser Pro Ile Lys Leu Ser Pro Ala Thr Pro
      660              665              670
Ser Arg Lys Arg Ser Val Ala Val Ser Asp Glu Glu Glu Val Glu Glu
      675              680              685
Glu Ala Glu Arg Arg Lys Glu Arg Cys Lys Arg Gly Arg Phe Val Val
      690              695              700
Lys Glu Glu Lys Lys Asp Ser Asn Glu Leu Ser Asp Ser Ala Gly Gly
705              710              715              720
Glu Asp Ser Ala Asp Leu Lys Arg Ala Gln Lys Asp Lys Gly Leu His
      725              730              735
Val Glu Val Arg Val Asn Arg Glu Trp Tyr Thr Gly Arg Val Thr Ala
      740              745              750
Val Glu Val Gly Lys His Val Val Arg Trp Lys Val Lys Phe Asp Tyr
      755              760              765
Val Pro Thr Asp Thr Thr Pro Arg Asp Arg Trp Val Glu Lys Gly Ser
      770              775              780
Glu Asp Val Arg Leu Met Lys Pro Pro Ser Pro Glu His Gln Ser Leu
785              790              795              800
Asp Thr Gln Gln Glu Gly Gly Glu Glu Glu Val Gly Pro Val Ala Gln
      805              810              815
Gln Ala Ile Ala Val Ala Glu Pro Ser Thr Ser Glu Cys Leu Arg Ile
      820              825              830
Glu Pro Asp Thr Thr Ala Leu Ser Thr Asn His Glu Thr Ile Asp Leu
      835              840              845
Leu Val Gln Ile Leu Arg Asn Cys Leu Arg Tyr Phe Leu Pro Pro Ser
      850              855              860
Phe Pro Ile Ser Lys Lys Gln Leu Ser Ala Met Asn Ser Asp Glu Leu
865              870              875              880
Ile Ser Phe Pro Leu Lys Glu Tyr Phe Lys Gln Tyr Glu Val Gly Leu
      885              890              895
Gln Asn Leu Cys Asn Ser Tyr Gln Ser Arg Ala Asp Ser Arg Ala Lys
      900              905              910
Ala Ser Glu Glu Ser Leu Arg Thr Ser Glu Arg Lys Leu Arg Glu Thr
      915              920              925
Glu Glu Lys Leu Gln Lys Leu Arg Thr Asn Ile Val Ala Leu Leu Gln
      930              935              940
Lys Val Gln Glu Asp Ile Asp Ile Asn Thr Asp Asp Glu Leu Asp Ala
945              950              955              960
Tyr Ile Glu Asp Leu Ile Thr Lys Gly Asp
      965              970

```

<210> 3379

<211> 898

<212> DNA

<213> Homo sapiens

<400> 3379

nagatctggg ctgaaacacg gttggtgctg atggccacag acagaggag cccagccctg
 60
 gtgggctcag ctaccttgac ggtgatggtc atcgacacca atggcaatcg cccaccatc
 120
 ccccaacctt gggagctccg agtgtcagaa gatgcgttat tgggctcaga gattgcacag
 180
 gtaacagggg atgatgtgga ctcaggaccc gtgctgtggg atgtgctaag cccatctggg
 240
 cccagagatc ccttcagtgt tggccgctat ggaggccgtg tctccctcac ggggcccctg
 300
 gactttgagc agtgtgaccg ctaccagctg cagctgctgg cacatgatgg gcctcatgag
 360
 ggccgtgcan acctcacagt gcttgtggag gatgtcaatg acaatgcacc tgccttctca
 420
 cagagcctct accaggtaat gctgcttgag cacacacccc caggcagtgc cattctctcc
 480
 gtctctgcca ctgatcggga ctcagggtgc aacggtcaca tttctacca cctggcttcc
 540
 cctgccgatg gcttcagtgt tgaccccaac aatgggaccc tgttcacaat agtgggaaca
 600
 ttggccttgg gccatgacgg gtcaggagca gtggatgtgg tgctggaagc acgagaccac
 660
 ggggctccag tccgggcagc acgagccaca gtgaacgtgc agctgcggga ccagaacgac
 720
 cagccccga gcttcacatt gttccactac cgtgtggctg tgactgaaga cctgccccct
 780
 ggctccactc tgctaaccct ggaggctaca gatgctgatg gaagccgcag ccatgccgct
 840
 gtggattaca gcatcatcag tggcaactgg ggccgagtct tccagctgga acccaggc
 898

<210> 3380

<211> 299

<212> PRT

<213> Homo sapiens

<400> 3380

Xaa	Ile	Trp	Ala	Glu	Thr	Arg	Leu	Val	Leu	Met	Ala	Thr	Asp	Arg	Gly
1				5					10					15	
Ser	Pro	Ala	Leu	Val	Gly	Ser	Ala	Thr	Leu	Thr	Val	Met	Val	Ile	Asp
			20					25					30		
Thr	Asn	Gly	Asn	Arg	Pro	Thr	Ile	Pro	Gln	Pro	Trp	Glu	Leu	Arg	Val
		35					40					45			
Ser	Glu	Asp	Ala	Leu	Leu	Gly	Ser	Glu	Ile	Ala	Gln	Val	Thr	Gly	Asn
	50					55					60				
Asp	Val	Asp	Ser	Gly	Pro	Val	Leu	Trp	Tyr	Val	Leu	Ser	Pro	Ser	Gly
65					70				75					80	
Pro	Gln	Asp	Pro	Phe	Ser	Val	Gly	Arg	Tyr	Gly	Gly	Arg	Val	Ser	Leu
			85					90					95		
Thr	Gly	Pro	Leu	Asp	Phe	Glu	Gln	Cys	Asp	Arg	Tyr	Gln	Leu	Gln	Leu
		100						105					110		
Leu	Ala	His	Asp	Gly	Pro	His	Glu	Gly	Arg	Ala	Xaa	Leu	Thr	Val	Leu
		115					120					125			
Val	Glu	Asp	Val	Asn	Asp	Asn	Ala	Pro	Ala	Phe	Ser	Gln	Ser	Leu	Tyr

130		135		140
Gln Val Met Leu Leu Glu His Thr Pro Pro Gly Ser Ala Ile Leu Ser				
145		150		155
Val Ser Ala Thr Asp Arg Asp Ser Gly Ala Asn Gly His Ile Ser Tyr				160
	165		170	175
His Leu Ala Ser Pro Ala Asp Gly Phe Ser Val Asp Pro Asn Asn Gly				
	180		185	190
Thr Leu Phe Thr Ile Val Gly Thr Leu Ala Leu Gly His Asp Gly Ser				
	195		200	205
Gly Ala Val Asp Val Val Leu Glu Ala Arg Asp His Gly Ala Pro Val				
	210		215	220
Arg Ala Ala Arg Ala Thr Val Asn Val Gln Leu Arg Asp Gln Asn Asp				
225		230		235
His Ala Pro Ser Phe Thr Leu Phe His Tyr Arg Val Ala Val Thr Glu				240
	245		250	255
Asp Leu Pro Pro Gly Ser Thr Leu Leu Thr Leu Glu Ala Thr Asp Ala				
	260		265	270
Asp Gly Ser Arg Ser His Ala Ala Val Asp Tyr Ser Ile Ile Ser Gly				
	275		280	285
Asn Trp Gly Arg Val Phe Gln Leu Glu Pro Arg				
290		295		

<210> 3381

<211> 1379

<212> DNA

<213> Homo sapiens

<400> 3381

```

ntgccgctcg tgtcagtcaa catggaggca gaggaatcgg agaaggccgc aacggagcaa
60
gagccgctgg aaggacaga acagacacta gatgcggagg aggagcagga ggaatccgaa
120
gaagcggcct gtggcagcaa gaaacgggta gtgccaggta ttgtgtacct gggccatata
180
ccgcgcgct tccggcccct gcacgtccgc aaccttctca ggcctatgg cgaggtcggg
240
cgctcttct ttcaggctga ggaccggttc gtgagacgca agaagaaggc agcagcagct
300
gccggaggga aaaagcggtc ctacaccaag gactacaccg agggatgggt ggagttccgt
360
gacaagcgca tagccaagcg cgtggcggcc agtctacaca acacgcctat gggtgcccgc
420
aggcgcagcc cttccgtta tgatctttgg aacctcaagt acttgaccg tttcacctgg
480
tcccacctca gcgagcacct cgcctttgag cgccagggtgc gcaggcagcg cttgagagcg
540
gaggttgctc aagccaagcg tgagaccgac ttctatcttc aaagtgtgga acggggacaa
600
cgctttcttg cggccgatgg ggacctgct cgcccagatg gtcctggac atttgcccag
660
cgtcctactg agcaggaact gagggcccg aaagcagcac ggccaggggg acgtgaacgg
720
gctcgcctgg caactgcca ggacaaggcc cgctccaaca aagggtcctt ggccaggatc
780

```

tttggagccc cgccaccctc agagagcatg gagggacctt cccttgtag ggactcctga
 840
 gggcctgggt gggcccttcc atttcctggc cctgctctgc ttcctgtcta cctcatacta
 900
 gaatgatcgt gactaccgg gcagacatct tactgtgttt ctcagaccaa gtgtctactg
 960
 atggcccaaa catggagttt tgtgggcttc cactgtcccc actccgaact cctgtatgtg
 1020
 cctggctgag tcacctaatt catactgtca tactagcata attatgacta ttgcatatgc
 1080
 ttgttttgtt tgactcttgg ctgcctacgt ctgtagggtc ccctgaaaat ccacttcct
 1140
 gcccccagaa agggccttta tttccaacta ggaggataat gcctagtcca ggcaatcttt
 1200
 ctctgttttag cagtcacagg tgagggtggt attagcatct tttttatgta gaaaaaattg
 1260
 agttaatggg gtggactggg ttgggaagaa atacatttcc taatgtattt atagaaaata
 1320
 aaaatatttt tatgtgaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1379

<210> 3382

<211> 279

<212> PRT

<213> Homo sapiens

<400> 3382

Xaa	Pro	Leu	Val	Ser	Val	Asn	Met	Glu	Ala	Glu	Glu	Ser	Glu	Lys	Ala
1				5				10					15		
Ala	Thr	Glu	Gln	Glu	Pro	Leu	Glu	Gly	Thr	Glu	Gln	Thr	Leu	Asp	Ala
			20					25					30		
Glu	Glu	Glu	Gln	Glu	Glu	Ser	Glu	Glu	Ala	Ala	Cys	Gly	Ser	Lys	Lys
		35				40					45				
Arg	Val	Val	Pro	Gly	Ile	Val	Tyr	Leu	Gly	His	Ile	Pro	Pro	Arg	Phe
	50				55					60					
Arg	Pro	Leu	His	Val	Arg	Asn	Leu	Leu	Ser	Ala	Tyr	Gly	Glu	Val	Gly
65				70					75					80	
Arg	Val	Phe	Phe	Gln	Ala	Glu	Asp	Arg	Phe	Val	Arg	Arg	Lys	Lys	Lys
			85					90					95		
Ala	Ala	Ala	Ala	Ala	Gly	Gly	Lys	Lys	Arg	Ser	Tyr	Thr	Lys	Asp	Tyr
			100					105					110		
Thr	Glu	Gly	Trp	Val	Glu	Phe	Arg	Asp	Lys	Arg	Ile	Ala	Lys	Arg	Val
	115					120					125				
Ala	Ala	Ser	Leu	His	Asn	Thr	Pro	Met	Gly	Ala	Arg	Arg	Arg	Ser	Pro
	130				135					140					
Phe	Arg	Tyr	Asp	Leu	Trp	Asn	Leu	Lys	Tyr	Leu	His	Arg	Phe	Thr	Trp
145				150					155					160	
Ser	His	Leu	Ser	Glu	His	Leu	Ala	Phe	Glu	Arg	Gln	Val	Arg	Arg	Gln
			165					170					175		
Arg	Leu	Arg	Ala	Glu	Val	Ala	Gln	Ala	Lys	Arg	Glu	Thr	Asp	Phe	Tyr
		180						185				190			
Leu	Gln	Ser	Val	Glu	Arg	Gly	Gln	Arg	Phe	Leu	Ala	Ala	Asp	Gly	Asp
	195					200					205				
Pro	Ala	Arg	Pro	Asp	Gly	Ser	Trp	Thr	Phe	Ala	Gln	Arg	Pro	Thr	Glu

```

      210              215              220
Gln Glu Leu Arg Ala Arg Lys Ala Ala Arg Pro Gly Gly Arg Glu Arg
225              230              235              240
Ala Arg Leu Ala Thr Ala Gln Asp Lys Ala Arg Ser Asn Lys Gly Leu
      245              250              255
Leu Ala Arg Ile Phe Gly Ala Pro Pro Pro Ser Glu Ser Met Glu Gly
      260              265              270
Pro Ser Leu Val Arg Asp Ser
      275

```

<210> 3383
 <211> 309
 <212> DNA
 <213> Homo sapiens

```

<400> 3383
ttttcttttc ctctgactgt agaacatgct tgctcatcat ggtagcaggg aaaaatgtca
60
gtgttgcttg cacacaaatt ttgtagctgg agtgagtatt gttgttattt gtgttatagg
120
aaatgctcac ttcttaacct cttttgtcct ggagcataga attactgcaa atgctcaccc
180
ctgggagctg tcctgcccc gatctccac acaaacactc cagcatgaaa gagcgagact
240
caatctcaaa aaaaaaaagt ttcgggcacc tgaacaggaa ctggtttcca tcatcaactc
300
agaaagccc
309

```

<210> 3384
 <211> 94
 <212> PRT
 <213> Homo sapiens

```

<400> 3384
Met Leu Ala His His Gly Ser Arg Glu Lys Cys Gln Cys Cys Leu His
1              5              10              15
Thr Asn Phe Val Ala Gly Val Ser Ile Val Val Ile Cys Val Ile Gly
      20              25              30
Asn Ala His Phe Leu Thr Ser Phe Val Leu Glu His Arg Ile Thr Ala
      35              40              45
Asn Ala His Pro Trp Glu Leu Ser Cys Pro Arg Ser Pro Thr Gln Thr
      50              55              60
Leu Gln His Glu Arg Ala Arg Leu Asn Leu Lys Lys Lys Lys Phe Arg
65              70              75              80
Ala Pro Glu Gln Glu Leu Val Ser Ile Ile Asn Ser Glu Ser
      85              90

```

<210> 3385
 <211> 720
 <212> DNA
 <213> Homo sapiens

<400> 3385

nncctaggag atgaagccgc cagcctgagc aagcctggca gatagacatg gccagacttg
 60
 gtaggggtga gccggcttgg ccagagggag gaggggtctat gctgaggtct actgatggta
 120
 gtgaaaacag tgacggtgcg ggggtgggga gcactgcggt ccacttcttc agccccccac
 180
 tatcctggaa gcttcagggt gggcccgagg cagcctccag cttcagcgac caccctgtt
 240
 cctcttgcca gggtctttgt gaacttcccc tcggccaagc agtacttcag ccagttcaag
 300
 cacatggagg atccccctga gatggagcgg agcccccagc tgcggaagca cgctgcccga
 360
 gtcattgggg ccctcaacac tgtcgtggag aacctgcatg accccgacaa ggtgtcctct
 420
 gtgctcgccc ttgtggggaa agcccacgcc ctcaagcaca aggtggaacc ggtgtacttc
 480
 aagatcctct ctgggggtct tctggagggtg gtgcgcgagg aatttgccag tgacttccca
 540
 cctgagacgc agagagcctg ggccaagctg cgtggcctca tctacagcca cgtgaccgct
 600
 gcctacaagg aagtgggctg ggtgcagcag gtccccaacg ccaccacccc accggccaca
 660
 ctgcccctct cggggccgta ggaccctcc ctccaccccc ctccctggca gcacctcgag
 720

<210> 3386

<211> 188

<212> PRT

<213> Homo sapiens

<400> 3386

Met	Val	Val	Lys	Thr	Val	Thr	Val	Arg	Gly	Trp	Gly	Ala	Leu	Arg	Ser
1			5					10					15		
Thr	Ser	Ser	Ala	Pro	His	Tyr	Pro	Gly	Ser	Phe	Arg	Val	Gly	Pro	Arg
			20					25					30		
Gln	Pro	Pro	Ala	Ser	Ala	Thr	Thr	Pro	Val	Pro	Leu	Ala	Arg	Phe	Phe
			35					40					45		
Val	Asn	Phe	Pro	Ser	Ala	Lys	Gln	Tyr	Phe	Ser	Gln	Phe	Lys	His	Met
			50					55					60		
Glu	Asp	Pro	Leu	Glu	Met	Glu	Arg	Ser	Pro	Gln	Leu	Arg	Lys	His	Ala
65								70					75		80
Cys	Arg	Val	Met	Gly	Ala	Leu	Asn	Thr	Val	Val	Glu	Asn	Leu	His	Asp
			85					90					95		
Pro	Asp	Lys	Val	Ser	Ser	Val	Leu	Ala	Leu	Val	Gly	Lys	Ala	His	Ala
			100					105					110		
Leu	Lys	His	Lys	Val	Glu	Pro	Val	Tyr	Phe	Lys	Ile	Leu	Ser	Gly	Val
			115					120					125		
Ile	Leu	Glu	Val	Val	Ala	Glu	Glu	Phe	Ala	Ser	Asp	Phe	Pro	Pro	Glu
			130					135					140		
Thr	Gln	Arg	Ala	Trp	Ala	Lys	Leu	Arg	Gly	Leu	Ile	Tyr	Ser	His	Val
145								150					155		160
Thr	Ala	Ala	Tyr	Lys	Glu	Val	Gly	Trp	Val	Gln	Gln	Val	Pro	Asn	Ala
			165					170					175		
Thr	Thr	Pro	Pro	Ala	Thr	Leu	Pro	Ser	Ser	Gly	Pro				

180

185

<210> 3387

<211> 3299

<212> DNA

<213> Homo sapiens

<400> 3387

nacgcgtgaa ggggaagcag gcacgtccgg aagcgctcct ccagcagggg cagctcactg
60
atgaggtcgg tgatggcggt ggtaaaggct tcctgggggt ttgccccgcc ggagtaatcc
120
ggaagaggcc tcttattagg gctctggtgg cggcgggcggc ggacccttgg ggtctggacg
180
caacggcggc gggagcatga acgccccctc agccttcgag tegtctctgc tcttcgaggg
240
cgagaagaag taagtgacgc cggctgcggc gggccgagga tcaccattaa caaggacacc
300
aaggtaccca atgcctgttt attcaccatc aacaaagaag accacacact gggaaacatc
360
attaaatcac aactcctaaa agaccgcgaa gtgctatttg ctggctacaa agtcccccac
420
cccttgagc acaagatcat catccgagt cagaccacgc cggactacag cccccaggaa
480
gcctttacca acgcatcac cgacctcatc agtgagctgt ccctgctgga ggagcgcttt
540
cgggtggcca taaaagacaa gcaggaagga attgagtagg ggccagaggg ggctctgctc
600
ggcctgtgag ccccgcttct acctgtgcct gacctccgc tccaggtacc acaccgagga
660
gagcggccgg tcccagccat ggcccgcctt gtggccaccc ctcaccctga caccgacgtg
720
ttggccaccc ctcaccctga caccgacgtg tcctgtacat agattaggtt ttatattcct
780
aataaagtat agcgggaagag acctggatgt ggacttgagc agcggtgact tcgcaagcaa
840
atggattgtc aggccttgatg caggcagatg acctgtttca ggggcgtccg gctggcaggg
900
atgaattcat tctggaccaa agatccgggg tccaggggct gctgcggggg ctgtgctgag
960
ccggagagaa gtgtgcaaac ccatgagctc ccaagagtct ctgctctaga agcctcaact
1020
cctgggcctg cctgtcagtc aaagcaggaa cacttcttcc tgcataactc gaaacacctt
1080
tccacaggct tcttgtccac agtagagttt aataaaaata ttactgaaa gacccccccc
1140
acccccatcg gcccaaagct gaataagtta gttagctgtg tccctgggtcc tttgcgatgg
1200
tgtgaggcta catcctcccc cagatggcta cgatgttgga gtccgtcagg gcggtgaggt
1260
aggtgaagga ggcattggcc accactgtgt tcaccatggg cttggtcacc acctggccaa
1320
gggcccaggg ctggggccac ttcaggatct gtgtgggggc ctgcagggct gccggcagca
1380

ggggtggctg cttcaggatg ttgctgacgt cgtagagcca cacgttgccc tcctcatccc
1440
cacagagcac aatcccccta tcagggcagg cgctgagcga gaagtaggcc aactcgggtg
1500
acgaccattg cagccgcgcc aggaccacca ctgccactgt ggactggctg ccccggtccc
1560
cccacgtctg cctccagctc cacaggcaga tgggtgccag gccgctcccc ttggaggcca
1620
cgatgtctc attcacaat gccagcccat cactctccg tccagatgcc tcggagccct
1680
cagagaagac gaattccact tcacacaccc tcctcttttg gggctggctc agccgcacgt
1740
cccagcagca gcagccgcc tcgcagccgg ccagcaggcg gccgtccggg caggaggcga
1800
cagggcagag gcgcagggg atagaggtg tgtccagtgt gagcagctgg ctggcctgga
1860
attcgtagtc ctggttgggc accccgatgt cccagaggat gatccgcttgc tcataggagg
1920
ccgtgaagag atgggtctcg tgggcggggc tgaagcacag ggtggcgatg gccttcttgt
1980
gggctcgat gacccgcag cagaagccgg cacgcacgtg cagcagccgg accaggcccc
2040
gtaggcctgc agccgccagc aactccagc gcttcttgtg gccagcctgt gtgaccacca
2100
tcagagcggc ccaggccaca gaaaagaact cctcgccggg tgccttgtac ttgtggagca
2160
cgatgcccgt ctggcaatca attacgcaca cagcctcccc gccgcacgtg gccacggtct
2220
gggatgtggc cccctcctcc caggccggct cgaaggcaca ggcccacagc tgggtctcga
2280
ggtcctgggg gctgttgttc ttgctgtggc actgcaggaa gtgcaggggc tccagcttca
2340
cagcaggctg gctgccatcg gagcctgcc cagggctgcc ctccacctgg gccgacgggg
2400
aggcacacgc ccgcttgctg ggagaaaggc tgagtgggac gtcgtctggc cgtttcaagg
2460
ccgccagtct ggccctgggc ttgtgggcag ctccagcttc tgggggcttc tctgggctgt
2520
tagccttttg cactgggtc ctactggcgg ccaccagctc ctccagagatc atccgcaccc
2580
gccactgggt gaactcgctg agggactcgg gcccgtagcg gacatccctg acagccgact
2640
tcacaaagtc cgctgggccc ttctcagcct cctcttcagg acccagtgtg gccatgaact
2700
tctcccagtg agctgtgacc ctgctgggtc gctcccgatt caggttctcc acctgagagt
2760
aagttgagga cgcatacctg ccattgacct tacggagcgt gggcaggaga aaggagactt
2820
tcaggttgtc attgaccgtc aggaaggggt tgccctccag gctgagttcc tcgagcttgg
2880
ggaactggca caaggcagta acatccccca gctgggttgtt ggccgagcgg aggacacgca
2940
ggtgggacag gccaggttg tccggcagcg tctccaggtg gttgttagac aggtcaagct
3000

cctgcagctg cgtcaggcgg cacaggagtt tgggggtccag gtgctcggaa agcagctcca
 3060
 atcctgacag gtccagactc cggatcttcc ccageccggc gctcttgggg cggccgcgct
 3120
 gcattagcag ccgcgcgcgag aggggggccc tggcgaggag gcgcagcccg cgctgaccca
 3180
 gtcggccacc ccggcgtgtg gcgtcgccct gcgtctcctg gagcccggca ctggcgctccg
 3240
 cggtaactga gcccaggagg cggcgccgcg cgagcccgtg ggcgttaacg accggaagg
 3299

<210> 3388

<211> 153

<212> PRT

<213> Homo sapiens

<400> 3388

Ser	Gly	Arg	Gly	Leu	Leu	Leu	Gly	Leu	Trp	Trp	Arg	Arg	Arg	Arg	Thr
1				5					10					15	
Leu	Gly	Val	Trp	Thr	Gln	Arg	Arg	Arg	Glu	His	Glu	Arg	Pro	Ser	Ser
			20					25					30		
Leu	Arg	Val	Val	Leu	Ala	Leu	Arg	Gly	Arg	Glu	Glu	Val	Ser	Asp	Ala
		35					40					45			
Gly	Cys	Gly	Gly	Pro	Arg	Ile	Thr	Ile	Asn	Lys	Asp	Thr	Lys	Val	Pro
50						55					60				
Asn	Ala	Cys	Leu	Phe	Thr	Ile	Asn	Lys	Glu	Asp	His	Thr	Leu	Gly	Asn
65					70					75				80	
Ile	Ile	Lys	Ser	Gln	Leu	Leu	Lys	Asp	Pro	Gln	Val	Leu	Phe	Ala	Gly
				85					90					95	
Tyr	Lys	Val	Pro	His	Pro	Leu	Glu	His	Lys	Ile	Ile	Ile	Arg	Val	Gln
			100					105					110		
Thr	Thr	Pro	Asp	Tyr	Ser	Pro	Gln	Glu	Ala	Phe	Thr	Asn	Ala	Ile	Thr
		115					120					125			
Asp	Leu	Ile	Ser	Glu	Leu	Ser	Leu	Leu	Glu	Glu	Arg	Phe	Arg	Val	Ala
	130					135					140				
Ile	Lys	Asp	Lys	Gln	Glu	Gly	Ile	Glu							
145					150										

<210> 3389

<211> 308

<212> DNA

<213> Homo sapiens

<400> 3389

nntgtctcca agcccttcca ccaccagcat gttctcattt ccagggtttct ctgttttaaaa
 60
 aacaaaagta ggcgcatcggg ggtcttcacg acgtacaccc agaagcaccc gtccatcgag
 120
 gacgggcctc cgtttgtgga gccgctgctt aacttcattt ggttctctgt gctggctgtg
 180
 gacggggaac cttctgacca gcctcatggg ctctcagag caggaggatg gggaggagag
 240
 cccacgcgac ggcagcccca tcgagctgga ctgaactggc caggccacgt ggagacacca
 300

cggtcgac
308

<210> 3390
<211> 102
<212> PRT
<213> Homo sapiens

<400> 3390
Xaa Val Ser Lys Pro Phe His His Gln His Val Leu Ile Ser Arg Phe
1 5 10 15
Leu Cys Leu Lys Asn Lys Ser Ser Ala Ser Val Val Phe Thr Thr Tyr
20 25 30
Thr Gln Lys His Pro Ser Ile Glu Asp Gly Pro Pro Phe Val Glu Pro
35 40 45
Leu Leu Asn Phe Ile Trp Phe Leu Leu Leu Ala Val Asp Gly Glu Pro
50 55 60
Ser Asp Gln Pro His Gly Leu Leu Arg Ala Gly Gly Trp Gly Gly Glu
65 70 75 80
Pro Gln Arg Arg Gln Pro His Arg Ala Gly Leu Asn Trp Pro Gly His
85 90 95
Val Glu Thr Pro Arg Ser
100

<210> 3391
<211> 1295
<212> DNA
<213> Homo sapiens

<400> 3391
atcgtctttt tactttatctt agaaacctgt ttggagggtta tggatgataa acccaatcct
60
gaagccctaa gtgacagttc agagcgtctt ttctcctttg gcgtcatcgc agatgttcaa
120
tttgcagact tagaagatgg ctttaatttc caaggaacca ggcggcgata ctacagacat
180
agtcttcttc acttacaggg tgccattgaa gactggaata atgaaagcag catgcctctg
240
tgtgtccttc agcttggaga tatcatcgat ggatataatg cacagtataa tgcattccaa
300
aagtccttag aacttggtat ggacatgttc aagaggctta aagttccagt tcatcataca
360
tggggaaacc atgaattcta taacttcagt agagagtatt taacacactc taaacttaac
420
actaagtttc tagaagatca gattgtacat catcctgaga ccatgccttc agaagattat
480
tatgcttatc attttgtacc attccctaaa ttccggttca ttttacttga tgcatatgac
540
ttgagtgtct tgggcgtgga tcagtcttct ccaaaatcgc agcagtgtat gaagatattg
600
agggagcaca atccaaatac ggaactgaat agtcctcaag gactttctga gccccagttt
660
gtccagttta atggaggatt cagccaagaa cagctaaact ggttgaatga agtgctaaca
720

ttctctgaca caaaccaaga aaaggtggtg attgtgagcc atcttcccat ttacccggac
 780
 gcctctgaca atgtgtgcct ggcttgaac tacagagatg ccctggcagt catttggctc
 840
 catgagtgtg tgggtgtgtt ctttgcctgt cacacccatg atggtggcta ctctgaggat
 900
 ccttttgggtg tataccacgt caacctagaa ggagttattg aaacagctcc agacagccaa
 960
 gcctttggca cagttcatgt ctatcctgac aaaatgatgt tgaaagggag aggcagagtt
 1020
 ccagatagaa ttatgaatta caagaaagaa agagccttcc attgttagtc taatttattt
 1080
 taacttgata gaaaatgagc tttgtgtttg tccctcctaa acaaaaaaat aaaaatcctc
 1140
 tgtctcattg tttagtattc agcttgcata acaaaatgta tttatagttt cagtgtgtga
 1200
 tggttgataa aatactcaga aatgttattt tggatcatgt atccattgta agttagaaac
 1260
 aaaccagggg ggaaactgag gcaggggtgt atagt
 1295

<210> 3392

<211> 355

<212> PRT

<213> Homo sapiens

<400> 3392

Ile	Val	Phe	Leu	Leu	Tyr	Leu	Glu	Thr	Cys	Leu	Glu	Val	Met	Asp	Asp	1	5	10	15
Lys	Pro	Asn	Pro	Glu	Ala	Leu	Ser	Asp	Ser	Ser	Glu	Arg	Leu	Phe	Ser	20	25	30	
Phe	Gly	Val	Ile	Ala	Asp	Val	Gln	Phe	Ala	Asp	Leu	Glu	Asp	Gly	Phe	35	40	45	
Asn	Phe	Gln	Gly	Thr	Arg	Arg	Tyr	Tyr	Arg	His	Ser	Leu	Leu	His		50	55	60	
Leu	Gln	Gly	Ala	Ile	Glu	Asp	Trp	Asn	Asn	Glu	Ser	Ser	Met	Pro	Cys	65	70	75	80
Cys	Val	Leu	Gln	Leu	Gly	Asp	Ile	Ile	Asp	Gly	Tyr	Asn	Ala	Gln	Tyr	85	90	95	
Asn	Ala	Ser	Lys	Lys	Ser	Leu	Glu	Leu	Val	Met	Asp	Met	Phe	Lys	Arg	100	105	110	
Leu	Lys	Val	Pro	Val	His	His	Thr	Trp	Gly	Asn	His	Glu	Phe	Tyr	Asn	115	120	125	
Phe	Ser	Arg	Glu	Tyr	Leu	Thr	His	Ser	Lys	Leu	Asn	Thr	Lys	Phe	Leu	130	135	140	
Glu	Asp	Gln	Ile	Val	His	His	Pro	Glu	Thr	Met	Pro	Ser	Glu	Asp	Tyr	145	150	155	160
Tyr	Ala	Tyr	His	Phe	Val	Pro	Phe	Pro	Lys	Phe	Arg	Phe	Ile	Leu	Leu	165	170	175	
Asp	Ala	Tyr	Asp	Leu	Ser	Val	Leu	Gly	Val	Asp	Gln	Ser	Ser	Pro	Lys	180	185	190	
Tyr	Glu	Gln	Cys	Met	Lys	Ile	Leu	Arg	Glu	His	Asn	Pro	Asn	Thr	Glu	195	200	205	
Leu	Asn	Ser	Pro	Gln	Gly	Leu	Ser	Glu	Pro	Gln	Phe	Val	Gln	Phe	Asn				

210		215		220
Gly Gly Phe Ser Gln Glu Gln Leu Asn Trp Leu Asn Glu Val Leu Thr				
225		230		240
Phe Ser Asp Thr Asn Gln Glu Lys Val Val Ile Val Ser His Leu Pro				
	245		250	255
Ile Tyr Pro Asp Ala Ser Asp Asn Val Cys Leu Ala Trp Asn Tyr Arg				
	260		265	270
Asp Ala Leu Ala Val Ile Trp Ser His Glu Cys Val Val Cys Phe Phe				
	275		280	285
Ala Gly His Thr His Asp Gly Gly Tyr Ser Glu Asp Pro Phe Gly Val				
	290		295	300
Tyr His Val Asn Leu Glu Gly Val Ile Glu Thr Ala Pro Asp Ser Gln				
305		310		320
Ala Phe Gly Thr Val His Val Tyr Pro Asp Lys Met Met Leu Lys Gly				
	325		330	335
Arg Gly Arg Val Pro Asp Arg Ile Met Asn Tyr Lys Lys Glu Arg Ala				
	340		345	350
Phe His Cys				
355				

<210> 3393
 <211> 510
 <212> DNA
 <213> Homo sapiens

<400> 3393
 nngcgactct gggaccctt gggctcgtggc agcagtggcg gcgatgtttg tcggctcggg
 60
 atgggtccag ganntgttac tccttcttct tttgttggg tctgggcagg ggccacagca
 120
 agtcggggcg ggtcaaactt cgagtacttg aaacgggagc actcgctgtc gaagccctac
 180
 caggggtgtg gcacaggcag ttcctcactg tggaatctga tgggcaatng catggtgatg
 240
 acccagtata tccgccttac cccagatatg caaagtaaac agggcgcctt gtggaaccgg
 300
 gtgccatgtt tctgagaga ctgggagttg caggtgcact tcaaaatcca tggacaagga
 360
 aagaagaatc tgcattggga tggcttgga atctgttaca caaaggatcg gatgcagcca
 420
 gggcctgtgt ttggaacat ggacaaattt gtggggctgg gagtatttgt agacacctac
 480
 cccaatgagg agaagcagcc cttcacgcgt
 510

<210> 3394
 <211> 170
 <212> PRT
 <213> Homo sapiens

<400> 3394
 Xaa Arg Leu Trp Asp Pro Leu Gly Arg Gly Ser Ser Gly Gly Asp Val
 1 5 10 15
 Cys Arg Leu Gly Met Gly Pro Gly Xaa Val Thr Pro Ser Ser Phe Val

20							25				30				
Gly	Val	Trp	Ala	Gly	Ala	Thr	Ala	Ser	Arg	Gly	Gly	Ser	Asn	Phe	Glu
35							40			45					
Tyr	Leu	Lys	Arg	Glu	His	Ser	Leu	Ser	Lys	Pro	Tyr	Gln	Gly	Val	Gly
50			55				60								
Thr	Gly	Ser	Ser	Ser	Leu	Trp	Asn	Leu	Met	Gly	Asn	Xaa	Met	Val	Met
65					70			75					80		
Thr	Gln	Tyr	Ile	Arg	Leu	Thr	Pro	Asp	Met	Gln	Ser	Lys	Gln	Gly	Ala
				85			90					95			
Leu	Trp	Asn	Arg	Val	Pro	Cys	Phe	Leu	Arg	Asp	Trp	Glu	Leu	Gln	Val
100							105			110					
His	Phe	Lys	Ile	His	Gly	Gln	Gly	Lys	Lys	Asn	Leu	His	Gly	Asp	Gly
115							120			125					
Leu	Ala	Ile	Trp	Tyr	Thr	Lys	Asp	Arg	Met	Gln	Pro	Gly	Pro	Val	Phe
130			135				140								
Gly	Asn	Met	Asp	Lys	Phe	Val	Gly	Leu	Gly	Val	Phe	Val	Asp	Thr	Tyr
145					150			155					160		
Pro	Asn	Glu	Glu	Lys	Gln	Pro	Phe	Thr	Arg						
165							170								

```
<210> 3395
<211> 807
<212> DNA
<213> Homo sapiens
```

```

<400> 3395
ntggcactta acggtggtgg ctggttctgc gccggatccg ggagaggggc gggcgccatt
60
gtgcttcgct gccgactgca tttcctcagt cacgggccta gaactccaag gagaaaggcg
120
gcggtgcgtg ttgctgcgag tgggacgcgc actggtcggg gccggctcag gagccgggaa
180
aaatctttta gaatggagtc taaaccttca aggattccaa gaagaatttc tgttcaacct
240
tccagctcct taagtgctag gatgatgtct ggaagcagag gaagtagttt aaatgatacc
300
tatcactcaa gagactcttc atttagattg gattctgaat atcagttctac atcagcatca
360
gcatctgcgt caccatttca atctgcatgg tatagtgaat ctgagataac tcaggggagca
420
cgctcaagat cgcagaacca gcaacgggat catgattcaa aaagacctaa actttcctgt
480
acaaactgta ctacctcagc tgggagaaat gttggaaatg gtttaaacac attatcagat
540
tcattcttga ggcatagtca agttcctaga tcttcatcaa tggtaacttg atcatttggg
600
acagacttaa tgagagagag gagagatttg gagagaagaa cagattcctc tattagtaat
660
cttatggatt atagtcaccg aagtggatgat ttcacaactt catcatatgt tcaagacaga
720
gttccttcat attcacaagg agcaagacca aaagaaaact caatgagcac tttacagttg
780
aatacatcat ccacaaacca ccaattg
807

```

<210> 3396
 <211> 205
 <212> PRT
 <213> Homo sapiens

<400> 3396
 Met Glu Ser Lys Pro Ser Arg Ile Pro Arg Arg Ile Ser Val Gln Pro
 1 5 10 15
 Ser Ser Ser Leu Ser Ala Arg Met Met Ser Gly Ser Arg Gly Ser Ser
 20 25 30
 Leu Asn Asp Thr Tyr His Ser Arg Asp Ser Ser Phe Arg Leu Asp Ser
 35 40 45
 Glu Tyr Gln Ser Thr Ser Ala Ser Ala Ser Ala Ser Pro Phe Gln Ser
 50 55 60
 Ala Trp Tyr Ser Glu Ser Glu Ile Thr Gln Gly Ala Arg Ser Arg Ser
 65 70 75 80
 Gln Asn Gln Gln Arg Asp His Asp Ser Lys Arg Pro Lys Leu Ser Cys
 85 90 95
 Thr Asn Cys Thr Thr Ser Ala Gly Arg Asn Val Gly Asn Gly Leu Asn
 100 105 110
 Thr Leu Ser Asp Ser Ser Trp Arg His Ser Gln Val Pro Arg Ser Ser
 115 120 125
 Ser Met Val Leu Gly Ser Phe Gly Thr Asp Leu Met Arg Glu Arg Arg
 130 135 140
 Asp Leu Glu Arg Arg Thr Asp Ser Ser Ile Ser Asn Leu Met Asp Tyr
 145 150 155 160
 Ser His Arg Ser Gly Asp Phe Thr Thr Ser Ser Tyr Val Gln Asp Arg
 165 170 175
 Val Pro Ser Tyr Ser Gln Gly Ala Arg Pro Lys Glu Asn Ser Met Ser
 180 185 190
 Thr Leu Gln Leu Asn Thr Ser Ser Thr Asn His Gln Leu
 195 200 205

<210> 3397
 <211> 492
 <212> DNA
 <213> Homo sapiens

<400> 3397
 ggcccagctt gccagggggc ccgggagagc agctacatgg agatgaaagg ccctccctca
 60
 ggatctcccc ccaggcagcc tcctcagttc tgggacagcc agaggcggcg gcaaccccag
 120
 ccacagagag acagtggcac ctacgagcag ccacagcccc tgatccatga ccgagactct
 180
 gtgggctccc agccccctct gcctccgggc ctaccccccg gccactatga ctcacccaag
 240
 aacagccaca tcctgggaca ttatgacttg cctccagtac ggcaccccc atcacctcan
 300
 cttcgacgcc aggatcgttg aggagccagg atggtatggc agaggcagca anacctggct
 360
 gttgctgctc aaggctgggg acagagcata gtgtaccct gccaggagca gggagtggac
 420

cggcaggctg tgaacatgaa caacgcttaa cagagcaagt gatgggagaa taattcatgg
 480
 cttctaccat gg
 492

<210> 3398
 <211> 163
 <212> PRT
 <213> Homo sapiens

<400> 3398
 Met Val Glu Ala Met Asn Tyr Ser Pro Ile Thr Cys Ser Val Lys Arg
 1 5 10 15
 Cys Ser Cys Ser Gln Pro Ala Gly Pro Leu Pro Ala Pro Gly Arg Gly
 20 25 30
 Thr Leu Cys Ser Val Pro Ser Leu Glu Gln Gln Gln Pro Gly Xaa Ala
 35 40 45
 Ala Ser Ala Ile Pro Ser Trp Leu Leu Asn Asp Pro Gly Val Glu Xaa
 50 55 60
 Glu Val Met Gly Asp Ala Val Leu Glu Ala Ser His Asn Val Gln Gly
 65 70 75 80
 Cys Gly Cys Ser Trp Val Ser His Ser Gly Arg Gly Val Gly Pro Glu
 85 90 95
 Ala Glu Gly Ala Gly Ser Pro Gln Ser Leu Gly His Gly Ser Gly Gly
 100 105 110
 Trp Ala Ala Arg Arg Cys His Cys Leu Ser Val Ala Gly Val Ala Ala
 115 120 125
 Ala Ser Gly Cys Pro Arg Thr Glu Glu Ala Ala Trp Gly Glu Ile Leu
 130 135 140
 Arg Glu Gly Leu Ser Ser Pro Cys Ser Cys Ser Pro Gly Pro Pro Gly
 145 150 155 160
 Lys Leu Gly

<210> 3399
 <211> 5784
 <212> DNA
 <213> Homo sapiens

<400> 3399
 nnatggaatc acagcggcag cggcggctgc ggcgcgcgcg agccgagtgt gagcggaaag
 60
 gggccccggcg tctgcctcga gactgaagac cgataaactc aagccatgga gggattactg
 120
 cattacatca accctgcaca cgccatttct ctccctaagt ccctgaatga ggagcgtctc
 180
 aaaggacagc tgtgtgatgt gctgctgatt gttggagacc aaaagttccg agctcataaa
 240
 aacgtcttgg ctgccagcag cgaatacttt cagagtttat tcacaaataa ggaaaatgag
 300
 tcacaaactg tatttcagct tgacttctgt gagccagatg cttttgataa tgttttaaac
 360
 tacatttatt cttcctctct atttgttgag aagagcagcc ttgctgctgt gcaagaactt
 420

ggctatagtc ttgggatttc ctttctgact aacatcgttt ctaaaacacc tcaagccccc
480
tttccaacgt gtcctaatag aaaaaaagtg tttgtagaag atgatgaaaa cagttctcaa
540
aagagaagtg tcattgtttg tcaaagtaga aacgaagcac aaggaaaaac tgtagtcaa
600
aatcaaccgg atgtaagcca tacttcccgg ccctctccta gcattgcagt caaggccaat
660
accaataagc cacatgtccc aaaaccaata gaaccacttc ataatttgtc attaactgaa
720
aagagttggc cgaaagatag ttctgtggta tatgcaaagt ctcttgagca ttctggatct
780
ttggatgata ctaatagaat cagtttggtg aaaagaaatg cagtgttgcc ttcaaagcct
840
ctgcaagaca gagaagctat ggatgataaa ccagggtgta gtggtcagct tccaaaagga
900
aaagctctag agctggcttt gaagagacca cggccacctg ttttgtctgt ttgtagctca
960
tcagagactc cctatctatt aaaagaaact aacaaaggaa atgggtcaagg tgaagataga
1020
aacttgttgt actattcaaa gttaggctta gtgatcccat ccagtggatc tggttctgga
1080
aaccaaagca ttgacaggag tggcccactt gttaagagtc tcctcagacg gtcattgtcg
1140
atggatagcc aggttccctgt ctattcacct tccatagatt tgaaatcttc ccagggatca
1200
tcttcggtgt ccagtgatgc accagggaat gtgttggtgt ctttatctca gaagtcatct
1260
ttaaagatt gtagtgaaaa aacagcccta gatgacaggg ctcaagtgtc acaaccgcat
1320
cgcctcaggt ccttttagtgc ttctcagtca acagacaggg agggagcttc ccctgtgact
1380
gaggtgcgca taaagactga gccagcagc ccgctgtcgg acccctcgga catcatccgc
1440
gtcactgtgg gagatgcggc aacaacagca gctgcctcat cttcgtcggc cacaagagac
1500
ctgtctctga aaacagaaga tgaccaaaaa gacatgagca gactcccagc aaaaaggagg
1560
ttccaagcgg accgaagatt gccgtttaag aagttaaagg tgaatgagca cgggtctcct
1620
gtgtcagaag ataattttga ggaaggctca agccctactc tccttgatgc agattttcca
1680
gattctgatt tgaataaaga cgaatttggt gagttggagg ggacgagacc aaacaaaaaa
1740
tttaaagca aacattgcct taagatcttt agatcaacag caggctctca ccgtcatgtt
1800
aacatgtacc ataaccaga aaagccctac gcttgtgaca tctgtcacia gaggtttcac
1860
accaacttca aagtgtggac acactgtcag acccaacacg gcatagtga gaacccatca
1920
ccagcctcta gttcacatgc tgttttggtg gaaaaattcc aaagaaagct gattgacata
1980
gtgagagaga gagaaattaa gaaggccctg atcattaagt taaggcgcgg caagcctggt
2040

tttcagggac agagtagctc ccaagcacag caagtcacga agaggaactt gagatctcga
2100
gccaaaggag cttacatttg tacttactgc ggaaaagcgt accgctttct ctctcaattt
2160
aagcagcata taaaaatgca tccaggagaa aaacccttg gagtaaataa agttgctaaa
2220
ccaaaagagc atgctcctct tgcaagtcca gtagaaaaca aggaggttta ccagtgccgc
2280
ctctgtaatg ctaagctctc ttctctccta gagcaaggaa gccacgagcg gctgtgccgg
2340
aacgcggccg tctgccctta ctgcagcctc aggtttttct cggccgagct gaagcaagaa
2400
cacgagagca agtgtgagta taagaagctg acctgcctcg agtgcacgag caccttcaag
2460
tctcttttca gcatctggcg gcaccagggt gaagtcata atcagaacaa catggcacc
2520
accgaaaact tttctttgcc cgttttgagc cacaatggtg atgtgactgg ttcttcaagg
2580
cccgaatccc agcctgagcc caacaaagta aaccacatcg tcaccacaaa agacgacaac
2640
gtgttcagtg attcttcaga acaagttaac ttcgactcgg aagattcctc ttgtcttccc
2700
gaagacctta gtctttccaa gcaactgaaa atccaagtca aagaggagcc tgtggaggag
2760
gctgaagaag aggcacccga ggccagcaca gcccccaaag aagcgggtcc tagcaaagaa
2820
gccagcctgt ggccctgcga gaagtgtggg aagatgttca cgggtgcataa gcagctggag
2880
cgtcaccagg agcttctgtg ctctgtgaaa ccatttattt gtcacgtgtg caacaaagct
2940
tttcgcacta attttcgact ctggagtcac ttccaatcgc acatgtctca ggcttcagag
3000
gaatcggcac ataaggaatc tgagggtgtg cctgttccca caaactctcc ctctccacca
3060
cctctgccac cgccaccacc actgcccag atccagcctc tggagcctga cagccccaca
3120
ggcctgtccg aaaacccaac tccagccaca gaaaaactgt ttgtgcccc aagaatcagac
3180
accctttttt accatgcccc acccctttca gcaatcacat ttaaaagaca gtttatgtgt
3240
aaactttgcc acaggacatt caagactgca tttagtcttt ggagtcacga acaaacacac
3300
aattgaaaga ccaacacttt ttacctatgg gaggcagtcc ccagatttca acctgaattg
3360
tgaaatgtgt cataagaaac aaaatatttt ttaaacaaga ataataaagg ttggagattg
3420
ttacgttga aattaagttg gaggcaaatt gataattact tagtaatgtc cttaacttta
3480
gaaatacagc ttttaaaata ttgtggttct ggaccttaca agaacaagat ggtttgattt
3540
cattaatgtt gaaattggat tggctctgat tgtgtgcatg gttcctcatt ccatgggtgc
3600
agtataatca ttttaattgag gtttttggtt ttttattgat tagtggaata ctgtcgaagt
3660

attccttctt ttaattattt tagacacttg agttctagtt aaatcttaac catgttctta
3720
agtccaaaat aggaagaagt ggagtagttt gcagtattga tttatatctt agactacttt
3780
agcaataaaa gataaatctc aactttaata agttatcctg acacttgata aaaataaata
3840
tttgggtattt tgtgggtcatg taaaacttct ttttgtatga aaattgtgag aaatttaaat
3900
cagcaatagt aacacttaga tttttataaa ctaacaaaaa cttgctctca gtcaatataa
3960
taaagtatag ttaaactcta aggaagacct gggaaatgaa aacaatttat ggaagtcctc
4020
tacagtcagt ttataagggc ttcagtagtg atagacattg ttataaaaac ttgtaccatg
4080
ttacatgtac actgcaccac agtctaaatt cagaccagca tttgaaggac tgcacatatt
4140
tcatttcctc tgattttctg tgtcacaaat tgaaaatctg agtgtagtta ggacaaaaaa
4200
caaagctaac catatggcac taattttgat tttacatta gtgtaacaaa taaggctggg
4260
acatatattt acatagatcc cagacactca agaattagca cagctgatgt aaaattctaa
4320
attaccattt acttccagat agagcagagg agaaacacct cactgcagtt tcaacatgct
4380
ttccaagaac aatatatacg acatatacat tttcctgcct ctctcttggtg acaatttctg
4440
ttagaatttg ttgggggtct gatgggttaa atcatgggca aggccattct ctacatcatt
4500
gcttaatat tcaaaaatag gtattagagc actatcagtg gtccaaaatt agttttagct
4560
acttattttg ctccatgggt tttgggcttt tcaaagaata ctatgtataa tttgtaattg
4620
aaagcctttc agtaggatat ccaaagttca atgtgtttca aaagggaaaa cttttacttg
4680
tggggggtggg agttagatgt attaaaaaaa cgaaactaca aaatcctttt aagaaagtaa
4740
taccaattta gactctagtt tgtgttacga ggtattcttt caaatttttt ttaaaagcca
4800
actactgtca ttaagaaata attttagatt tgtgctctag cagaaaataa ctctgtacct
4860
atcaatctta ttgccaacat tccataccag tggtaggaaa gatattctca tttttttat
4920
tgaaccagac atttttataa aatactgatt gactttgtac attatggata ttatatatga
4980
aattttgcct tgtattcttt cacttgaaaa aactccaaaa ttccacaata ttttagtagt
5040
taacttccta ttctttctta aatttgatgg agaagggaaa ataaattgca gttattgatt
5100
cttgccatct ttgttttctt aaagaaatct atgcatttta aggataaaac taaagcatat
5160
gggtttacat gaaacatcag gatggattat tgtacattga attcattccg cgtataatgt
5220
gggtatttctt actctgtcca tcttggtagc tgtcacttca aaagaagaca gtttcctga
5280

gtaatcatca cctacatggc cattagagta tctatcgggtg ataattccat gatacagagt
 5340
 atcttggcat tataaattca gtatcccagg acctaaacct ttatgtaca ttttcgaaga
 5400
 ttttttaaaa ataattattgt taatcagtaa aaaaaaaaaa tttttttgat ctaaacatag
 5460
 gttctgcata tctgttagat tttaaaaatg actgggtgttt tgtcttcaca tttttgtcta
 5520
 agcaaggaat ataagatttc aaataaaaatt ttgaacccaaa aacatttata atgccgttct
 5580
 ggtttttcta ttacttttta tactgtactt taaaagcatt aggctgaaag agtttatttt
 5640
 ggtgggtcaaa aaaaatatgc ttccactcat gtaactattt taaatgttaa gtagtaaaat
 5700
 aatgaaagat atgttaatta ctttattcag taaagttttt taagaatggt tatctcagcc
 5760
 agtaggcaaa tacttgggggt aaaa
 5784

<210> 3400

<211> 1069

<212> PRT

<213> Homo sapiens

<400> 3400

Thr	Gln	Ala	Met	Glu	Gly	Leu	Leu	His	Tyr	Ile	Asn	Pro	Ala	His	Ala
1				5					10					15	
Ile	Ser	Leu	Leu	Ser	Ala	Leu	Asn	Glu	Glu	Arg	Leu	Lys	Gly	Gln	Leu
		20					25						30		
Cys	Asp	Val	Leu	Leu	Ile	Val	Gly	Asp	Gln	Lys	Phe	Arg	Ala	His	Lys
		35					40					45			
Asn	Val	Leu	Ala	Ala	Ser	Ser	Glu	Tyr	Phe	Gln	Ser	Leu	Phe	Thr	Asn
		50				55					60				
Lys	Glu	Asn	Glu	Ser	Gln	Thr	Val	Phe	Gln	Leu	Asp	Phe	Cys	Glu	Pro
65					70					75				80	
Asp	Ala	Phe	Asp	Asn	Val	Leu	Asn	Tyr	Ile	Tyr	Ser	Ser	Ser	Leu	Phe
			85					90						95	
Val	Glu	Lys	Ser	Ser	Leu	Ala	Ala	Val	Gln	Glu	Leu	Gly	Tyr	Ser	Leu
		100						105					110		
Gly	Ile	Ser	Phe	Leu	Thr	Asn	Ile	Val	Ser	Lys	Thr	Pro	Gln	Ala	Pro
		115				120						125			
Phe	Pro	Thr	Cys	Pro	Asn	Arg	Lys	Lys	Val	Phe	Val	Glu	Asp	Asp	Glu
		130				135					140				
Asn	Ser	Ser	Gln	Lys	Arg	Ser	Val	Ile	Val	Cys	Gln	Ser	Arg	Asn	Glu
145				150						155				160	
Ala	Gln	Gly	Lys	Thr	Val	Ser	Gln	Asn	Gln	Pro	Asp	Val	Ser	His	Thr
			165					170						175	
Ser	Arg	Pro	Ser	Pro	Ser	Ile	Ala	Val	Lys	Ala	Asn	Thr	Asn	Lys	Pro
		180						185					190		
His	Val	Pro	Lys	Pro	Ile	Glu	Pro	Leu	His	Asn	Leu	Ser	Leu	Thr	Glu
		195				200						205			
Lys	Ser	Trp	Pro	Lys	Asp	Ser	Ser	Val	Val	Tyr	Ala	Lys	Ser	Leu	Glu
		210				215					220				
His	Ser	Gly	Ser	Leu	Asp	Asp	Pro	Asn	Arg	Ile	Ser	Leu	Val	Lys	Arg

225		230		235		240									
Asn	Ala	Val	Leu	Pro	Ser	Lys	Pro	Leu	Gln	Asp	Arg	Glu	Ala	Met	Asp
		245							250					255	
Asp	Lys	Pro	Gly	Val	Ser	Gly	Gln	Leu	Pro	Lys	Gly	Lys	Ala	Leu	Glu
		260							265					270	
Leu	Ala	Leu	Lys	Arg	Pro	Arg	Pro	Pro	Val	Leu	Ser	Val	Cys	Ser	Ser
		275							280					285	
Ser	Glu	Thr	Pro	Tyr	Leu	Leu	Lys	Glu	Thr	Asn	Lys	Gly	Asn	Gly	Gln
		290							295					300	
Gly	Glu	Asp	Arg	Asn	Leu	Leu	Tyr	Tyr	Ser	Lys	Leu	Gly	Leu	Val	Ile
		305												320	
Pro	Ser	Ser	Gly	Ser	Gly	Ser	Gly	Asn	Gln	Ser	Ile	Asp	Arg	Ser	Gly
				325					330					335	
Pro	Leu	Val	Lys	Ser	Leu	Leu	Arg	Arg	Ser	Leu	Ser	Met	Asp	Ser	Gln
				340					345					350	
Val	Pro	Val	Tyr	Ser	Pro	Ser	Ile	Asp	Leu	Lys	Ser	Ser	Gln	Gly	Ser
				355					360					365	
Ser	Ser	Val	Ser	Ser	Asp	Ala	Pro	Gly	Asn	Val	Leu	Cys	Ala	Leu	Ser
				370					375					380	
Gln	Lys	Ser	Ser	Leu	Lys	Asp	Cys	Ser	Glu	Lys	Thr	Ala	Leu	Asp	Asp
				385					390					400	
Arg	Pro	Gln	Val	Leu	Gln	Pro	His	Arg	Leu	Arg	Ser	Phe	Ser	Ala	Ser
				405					410					415	
Gln	Ser	Thr	Asp	Arg	Glu	Gly	Ala	Ser	Pro	Val	Thr	Glu	Val	Arg	Ile
				420					425					430	
Lys	Thr	Glu	Pro	Ser	Ser	Pro	Leu	Ser	Asp	Pro	Ser	Asp	Ile	Ile	Arg
				435					440					445	
Val	Thr	Val	Gly	Asp	Ala	Ala	Thr	Thr	Ala	Ala	Ala	Ser	Ser	Ser	Ser
				450					455					460	
Val	Thr	Arg	Asp	Leu	Ser	Leu	Lys	Thr	Glu	Asp	Asp	Gln	Lys	Asp	Met
				465					470					475	
Ser	Arg	Leu	Pro	Ala	Lys	Arg	Arg	Phe	Gln	Ala	Asp	Arg	Arg	Leu	Pro
				485					490					495	
Phe	Lys	Lys	Leu	Lys	Val	Asn	Glu	His	Gly	Ser	Pro	Val	Ser	Glu	Asp
				500					505					510	
Asn	Phe	Glu	Gly	Ser	Ser	Pro	Thr	Leu	Leu	Asp	Ala	Asp	Phe	Pro	
				515					520					525	
Asp	Ser	Asp	Leu	Asn	Lys	Asp	Glu	Phe	Gly	Glu	Leu	Glu	Gly	Thr	Arg
				530					535					540	
Pro	Asn	Lys	Lys	Phe	Lys	Cys	Lys	His	Cys	Leu	Lys	Ile	Phe	Arg	Ser
				545					550					555	
Thr	Ala	Gly	Leu	His	Arg	His	Val	Asn	Met	Tyr	His	Asn	Pro	Glu	Lys
				565					570					575	
Pro	Tyr	Ala	Cys	Asp	Ile	Cys	His	Lys	Arg	Phe	His	Thr	Asn	Phe	Lys
				580					585					590	
Val	Trp	Thr	His	Cys	Gln	Thr	Gln	His	Gly	Ile	Val	Lys	Asn	Pro	Ser
				595					600					605	
Pro	Ala	Ser	Ser	Ser	His	Ala	Val	Leu	Asp	Glu	Lys	Phe	Gln	Arg	Lys
				610					615					620	
Leu	Ile	Asp	Ile	Val	Arg	Glu	Arg	Glu	Ile	Lys	Lys	Ala	Leu	Ile	Ile
				625					630					635	
Lys	Leu	Arg	Arg	Gly	Lys	Pro	Gly	Phe	Gln	Gly	Gln	Ser	Ser	Ser	Gln
				645					650					655	
Ala	Gln	Gln	Val	Ile	Lys	Arg	Asn	Leu	Arg	Ser	Arg	Ala	Lys	Gly	Ala

```

        660                665                670
Tyr Ile Cys Thr Tyr Cys Gly Lys Ala Tyr Arg Phe Leu Ser Gln Phe
        675                680                685
Lys Gln His Ile Lys Met His Pro Gly Glu Lys Pro Leu Gly Val Asn
        690                695                700
Lys Val Ala Lys Pro Lys Glu His Ala Pro Leu Ala Ser Pro Val Glu
705                710                715                720
Asn Lys Glu Val Tyr Gln Cys Arg Leu Cys Asn Ala Lys Leu Ser Ser
        725                730                735
Leu Leu Glu Gln Gly Ser His Glu Arg Leu Cys Arg Asn Ala Ala Val
        740                745                750
Cys Pro Tyr Cys Ser Leu Arg Phe Phe Ser Pro Glu Leu Lys Gln Glu
        755                760                765
His Glu Ser Lys Cys Glu Tyr Lys Lys Leu Thr Cys Leu Glu Cys Met
        770                775                780
Arg Thr Phe Lys Ser Ser Phe Ser Ile Trp Arg His Gln Val Glu Val
785                790                795                800
His Asn Gln Asn Asn Met Ala Pro Thr Glu Asn Phe Ser Leu Pro Val
        805                810                815
Leu Asp His Asn Gly Asp Val Thr Gly Ser Ser Arg Pro Gln Ser Gln
        820                825                830
Pro Glu Pro Asn Lys Val Asn His Ile Val Thr Thr Lys Asp Asp Asn
        835                840                845
Val Phe Ser Asp Ser Ser Glu Gln Val Asn Phe Asp Ser Glu Asp Ser
        850                855                860
Ser Cys Leu Pro Glu Asp Leu Ser Leu Ser Lys Gln Leu Lys Ile Gln
865                870                875                880
Val Lys Glu Glu Pro Val Glu Glu Ala Glu Glu Glu Ala Pro Glu Ala
        885                890                895
Ser Thr Ala Pro Lys Glu Ala Gly Pro Ser Lys Glu Ala Ser Leu Trp
        900                905                910
Pro Cys Glu Lys Cys Gly Lys Met Phe Thr Val His Lys Gln Leu Glu
        915                920                925
Arg His Gln Glu Leu Leu Cys Ser Val Lys Pro Phe Ile Cys His Val
        930                935                940
Cys Asn Lys Ala Phe Arg Thr Asn Phe Arg Leu Trp Ser His Phe Gln
945                950                955                960
Ser His Met Ser Gln Ala Ser Glu Glu Ser Ala His Lys Glu Ser Glu
        965                970                975
Val Cys Pro Val Pro Thr Asn Ser Pro Ser Pro Pro Pro Leu Pro Pro
        980                985                990
Pro Pro Pro Leu Pro Lys Ile Gln Pro Leu Glu Pro Asp Ser Pro Thr
        995                1000                1005
Gly Leu Ser Glu Asn Pro Thr Pro Ala Thr Glu Lys Leu Phe Val Pro
        1010                1015                1020
Gln Glu Ser Asp Thr Leu Phe Tyr His Ala Pro Pro Leu Ser Ala Ile
1025                1030                1035                1040
Thr Phe Lys Arg Gln Phe Met Cys Lys Leu Cys His Arg Thr Phe Lys
        1045                1050                1055
Thr Ala Phe Ser Leu Trp Ser His Glu Gln Thr His Asn
        1060                1065

```

<210> 3401

<211> 579

<212> DNA

<213> Homo sapiens

<400> 3401

gttgaaaata aggaaaagga cagcaatatg ccacactttc aaactttgca agctattgtt
 60
 tctcacttcc aaaagttatt tgatgtgcct tctttaaatg gagtctatcc ccgaatgaat
 120
 gaagtttata ctaggcttgg agaaatgaac aatgctgtga gaaacctcca agaactctta
 180
 gaattagata gttcatcctc attgtgtgtg ctagtaagca ctggttgaaa actctgtagg
 240
 ctgattaatg aagatgtgaa tgagcagggt atgcagggtat taggacctga agacctccag
 300
 agcattatct acaaattgga agaacacgag gaatttttcc cagcatttca ggcatttact
 360
 aatgatctac ttgaaatctt agaaattgat gactctggat gccattgtac ctgcagtaaa
 420
 gaaattaaaa gtactttcat actgaaaaca aatcaaatca tttttactgt gtaaattgta
 480
 ttcttaacat tttgtatttt gtaggattga tcttattttg agacaagggt tgtaaaatgt
 540
 atttgctctc agaattcatc cccttcttag tatttaggtc
 579

<210> 3402

<211> 148

<212> PRT

<213> Homo sapiens

<400> 3402

Met	Pro	His	Phe	Gln	Thr	Leu	Gln	Ala	Ile	Val	Ser	His	Phe	Gln	Lys
1				5					10					15	
Leu	Phe	Asp	Val	Pro	Ser	Leu	Asn	Gly	Val	Tyr	Pro	Arg	Met	Asn	Glu
		20						25					30		
Val	Tyr	Thr	Arg	Leu	Gly	Glu	Met	Asn	Asn	Ala	Val	Arg	Asn	Leu	Gln
		35					40					45			
Glu	Leu	Leu	Glu	Leu	Asp	Ser	Ser	Ser	Ser	Leu	Cys	Val	Leu	Val	Ser
	50					55					60				
Thr	Val	Gly	Lys	Leu	Cys	Arg	Leu	Ile	Asn	Glu	Asp	Val	Asn	Glu	Gln
65					70					75					80
Val	Met	Gln	Val	Leu	Gly	Pro	Glu	Asp	Leu	Gln	Ser	Ile	Ile	Tyr	Lys
				85					90					95	
Leu	Glu	Glu	His	Glu	Glu	Phe	Phe	Pro	Ala	Phe	Gln	Ala	Phe	Thr	Asn
			100					105					110		
Asp	Leu	Leu	Glu	Ile	Leu	Glu	Ile	Asp	Asp	Ser	Gly	Cys	His	Cys	Thr
		115					120					125			
Cys	Ser	Lys	Glu	Ile	Lys	Ser	Thr	Phe	Ile	Leu	Lys	Thr	Asn	Gln	Ile
	130					135						140			
Ile	Phe	Thr	Val												
145															

<210> 3403

<211> 1696

<212> DNA

<213> Homo sapiens

<400> 3403

aaaaacatca gtgtctgtgg gtagttagaa tcttcagttc ctgtgagcgt cggcgtcttc
60
tgggcctgtg gagtttcttg gacaggggcc gcggggctcc aggacggcgc ccttagcgac
120
accatggccc gaaatgcaga aaaggccatg acggccttag caagatttcg ccaggctcag
180
ctggaagagg gaaaagtga ggaacgaaga ccctttcttg cctcagaatg tactgaactg
240
cctaagctg agaagtggag acgacagatc attggagaga tctctaaaaa agtggctcag
300
attcagaatg ctggttagg tgaatttcga attcgtgacc tgaatgatga aattaacaag
360
ctgctaaggg agaaaggaca ctgggaggtc cggataaagg agctgggagg tcttgattat
420
ggaaaagttg gccctaaaat gctggatcat gaaggaaaag aagtcccagg aaaccgaggt
480
tacaagtact ttggagcagc aaaagatttg cctgggtgta gagagctgtt tgaaaaanga
540
acctcttcct cctcccagnn aaagacacgt gctgagctca tgaaggcaat cgattttgag
600
tactatggtt acctagatga agatgatggt gttattgtgc ctttggaaaca ggaatatgaa
660
aagaaactca gagccgagtt agtggaaaag tggaaagcag agagagaggc tcggctggca
720
agaggagaaa aggaagagga ggaggaagag gaggaagaga tcaacatcta tgcagtcacc
780
gaggaggagt cggacgagga aggcagccag gagaaaggag gggacgacag ccagcagaag
840
ttcattgctc acgtccctgt tccctcgcag caagagattg aggaggcact ggtgcgaagg
900
aagaaaatgg aactcctcca gaagtatgca agcgagacc tgcaggccca aagtgaagaa
960
gccagaaggc tcttggggta ttaggaccca gctggggctc tcttggagt tcttccatcc
1020
cccagtggta cctcaggacc cagggtgca gacacaggct ggtgctgcaa gggctcctgc
1080
cccattctca gccttccttc cctctccttg tctcatgttg accggagggt aggggtctgt
1140
ccctggtctt cctggtaggt tttgtacaca tattttgcta ctgtgtggat ccatttat
1200
ttattgtgga gtgtatacaa caggttgca actggctgcc tgtgtcttat tttgacttgc
1260
actgccattt tgaggggaga agaatcaatt agtggcaaac atttaaaaat gcaatttttt
1320
gcagacaaa gtataatttt aaaaaatgca aattttctaa aagacacatc tcttgaaaaa
1380
tgagatgatg tggccaggcg cagtggctca cgctgtaac ccagcactt tgggaggccg
1440
aggcgggagg gtcacgaggt caagagatgg agaccatcct ggccaacatg gtgaaacccc
1500

atgtctacta aaaatacaaa aaaattagct gggcgtactg gcatgcacct gtagtcccag
 1560
 ctgcttttggg aggctgaggc aggagaatca cttgaacccc cggagggtgga ggtttgagtg
 1620
 agcccagatc gtggccattg actccaagcc ttgggacaag tgggaacctc ttccccccaa
 1680
 aaaaaaaaaa aagttt
 1696

<210> 3404

<211> 286

<212> PRT

<213> Homo sapiens

<400> 3404

Met	Ala	Arg	Asn	Ala	Glu	Lys	Ala	Met	Thr	Ala	Leu	Ala	Arg	Phe	Arg	1	10	15
Gln	Ala	Gln	Leu	Glu	Glu	Gly	Lys	Val	Lys	Glu	Arg	Arg	Pro	Phe	Leu	20	25	30
Ala	Ser	Glu	Cys	Thr	Glu	Leu	Pro	Lys	Ala	Glu	Lys	Trp	Arg	Arg	Gln	35	40	45
Ile	Ile	Gly	Glu	Ile	Ser	Lys	Lys	Val	Ala	Gln	Ile	Gln	Asn	Ala	Gly	50	55	60
Leu	Gly	Glu	Phe	Arg	Ile	Arg	Asp	Leu	Asn	Asp	Glu	Ile	Asn	Lys	Leu	65	70	75
Leu	Arg	Glu	Lys	Gly	His	Trp	Glu	Val	Arg	Ile	Lys	Glu	Leu	Gly	Gly	85	90	95
Pro	Asp	Tyr	Gly	Lys	Val	Gly	Pro	Lys	Met	Leu	Asp	His	Glu	Gly	Lys	100	105	110
Glu	Val	Pro	Gly	Asn	Arg	Gly	Tyr	Lys	Tyr	Phe	Gly	Ala	Ala	Lys	Asp	115	120	125
Leu	Pro	Gly	Val	Arg	Glu	Leu	Phe	Glu	Lys	Xaa	Thr	Ser	Ser	Ser	Ser	130	135	140
Gln	Xaa	Lys	Thr	Arg	Ala	Glu	Leu	Met	Lys	Ala	Ile	Asp	Phe	Glu	Tyr	145	150	155
Tyr	Gly	Tyr	Leu	Asp	Glu	Asp	Asp	Gly	Val	Ile	Val	Pro	Leu	Glu	Gln	165	170	175
Glu	Tyr	Glu	Lys	Lys	Leu	Arg	Ala	Glu	Leu	Val	Glu	Lys	Trp	Lys	Ala	180	185	190
Glu	Arg	Glu	Ala	Arg	Leu	Ala	Arg	Gly	Glu	Lys	Glu	Glu	Glu	Glu	Glu	195	200	205
Glu	Glu	Glu	Glu	Ile	Asn	Ile	Tyr	Ala	Val	Thr	Glu	Glu	Glu	Ser	Asp	210	215	220
Glu	Glu	Gly	Ser	Gln	Glu	Lys	Gly	Gly	Asp	Asp	Ser	Gln	Gln	Lys	Phe	225	230	235
Ile	Ala	His	Val	Pro	Val	Pro	Ser	Gln	Gln	Glu	Ile	Glu	Glu	Ala	Leu	245	250	255
Val	Arg	Arg	Lys	Lys	Met	Glu	Leu	Leu	Gln	Lys	Tyr	Ala	Ser	Glu	Thr	260	265	270
Leu	Gln	Ala	Gln	Ser	Glu	Glu	Ala	Arg	Arg	Leu	Leu	Gly	Tyr			275	280	285

<210> 3405

<211> 402

<212> DNA

<213> Homo sapiens

<400> 3405

```

gggtgggagg ccccttgca ggagaggctg gcgttctatc agacagcaat tgaaagcgcc
60
agacaagctg gagacagcgc caagatgcgg cgctacgacg gggggcttaa aacactggaa
120
aacctgctcg cctccatccg taagggaat gccattgacg aagcggacat cccgccgcca
180
gtggccatag gaaaaggccc ggcgccacg cctacctaca gccctgcacc caccagccg
240
gccctagaa tcgcgtcagc cccagagccc agggtcaccc tggagggacc ttctgccacc
300
gccccagcct catctccagg cttggctaag ccccagatgc ccccagggtcc ctgcagccct
360
ccctctggcc cagttgcaga gccgccagcg cgactacaag ct
402

```

<210> 3406

<211> 134

<212> PRT

<213> Homo sapiens

<400> 3406

```

Gly Trp Glu Ala Pro Leu Gln Glu Arg Leu Ala Phe Tyr Gln Thr Ala
1          5          10          15
Ile Glu Ser Ala Arg Gln Ala Gly Asp Ser Ala Lys Met Arg Arg Tyr
20          25          30
Asp Arg Gly Leu Lys Thr Leu Glu Asn Leu Leu Ala Ser Ile Arg Lys
35          40          45
Gly Asn Ala Ile Asp Glu Ala Asp Ile Pro Pro Pro Val Ala Ile Gly
50          55          60
Lys Gly Pro Ala Ser Thr Pro Thr Tyr Ser Pro Ala Pro Thr Gln Pro
65          70          75          80
Ala Pro Arg Ile Ala Ser Ala Pro Glu Pro Arg Val Thr Leu Glu Gly
85          90          95
Pro Ser Ala Thr Ala Pro Ala Ser Ser Pro Gly Leu Ala Lys Pro Gln
100         105         110
Met Pro Pro Gly Pro Cys Ser Pro Pro Ser Gly Pro Val Ala Glu Pro
115         120         125
Pro Ala Arg Leu Gln Ala
130

```

<210> 3407

<211> 535

<212> DNA

<213> Homo sapiens

<400> 3407

```

ggaatgaggg gggatgggga agaaccccc aggacagcac caagcaggtc tgcggggacc
60
tttcccgagc accatgcctt ctgcggcgtg aggcaggtgg cggcaccgac aggcccgggg
120

```

gggacctttc ccggacaccc aacctcctcg gtggcgaggc aggtggcggc accgacaggg
 180
 ccggcgggga cctttcccgg ancacctggc ctccttggca agcaggtggc ggcaccaaca
 240
 ggcccggggg ggacctttcc cggacacctg gcctcctcgg cgaggcaggt ggcagaactg
 300
 gttccacgtc tgatcttct tagacaaacc tgccttcaga ggaaattgtg ttcaactgga
 360
 gaaactggaa aatgtactag atattggctg atatgaagga tatatgtttt aagtatgata
 420
 attcgatttt ggctctgtag ggaaaggctc ttattttaaa aagatgtgca ctagagaaaa
 480
 aggaaacagc atgtagcaaa tacatccacg gatgtcctcc tggtttaaaa aaaaa
 535

<210> 3408

<211> 131

<212> PRT

<213> Homo sapiens

<400> 3408

Gly	Met	Arg	Gly	Asp	Gly	Glu	Glu	Pro	Pro	Arg	Thr	Ala	Pro	Ser	Arg
1				5					10					15	
Ser	Ala	Gly	Thr	Phe	Pro	Gly	His	His	Ala	Phe	Ser	Ala	Val	Arg	Gln
			20					25					30		
Val	Ala	Ala	Pro	Thr	Gly	Pro	Gly	Gly	Thr	Phe	Pro	Gly	His	Pro	Thr
		35					40					45			
Ser	Ser	Val	Ala	Arg	Gln	Val	Ala	Ala	Pro	Thr	Gly	Pro	Ala	Gly	Thr
	50					55					60				
Phe	Pro	Gly	Xaa	Pro	Gly	Leu	Leu	Gly	Lys	Gln	Val	Ala	Ala	Pro	Thr
65					70				75					80	
Gly	Pro	Gly	Gly	Thr	Phe	Pro	Gly	His	Leu	Ala	Ser	Ser	Ala	Arg	Gln
				85				90					95		
Val	Ala	Glu	Leu	Val	Pro	Arg	Leu	Ile	Phe	Leu	Arg	Gln	Thr	Cys	Leu
			100				105					110			
Gln	Arg	Lys	Leu	Cys	Ser	Thr	Gly	Glu	Thr	Gly	Lys	Cys	Thr	Arg	Tyr
	115					120					125				
Trp	Leu	Ile													
	130														

<210> 3409

<211> 959

<212> DNA

<213> Homo sapiens

<400> 3409

nagatctccg aggacaccgg acgggagcgc ttggccatcc tctctccggc agaggagcag
 60
 acgtttgctt tccaagtgca aaactacaga cacgcgcgcg cacacacgca agcacacgcg
 120
 gagagagagg aaccttgccg gtccgaggca gctctgcgcg tcccctcctg cgcttagcat
 180
 cctcggccca gcgcggcccg caccgccatg gaggtgctgg agagcgggga gcagggcgtg
 240

ctgcagtggg accgcaagct gagcgagctg tcagagcccg gggacggcga ggccctcatg
 300
 taccacacgc acttctcaga acttctggat gagttttccc agaacgtctt gggtcagctc
 360
 ctgaatgatc ctttctcttc agagaagagt gtgtcaatgg aggtggaacc ttccccgacg
 420
 tccccggcgc ctctcatcca ggctgagcac agctactccc tgtgcgagga gcctcggggc
 480
 cagtcgccct tcaccacat taccaccagt gacagcttca atgacgatga ggtggaaagt
 540
 nngagaaatg gtacctgtct acagacttcc cttcaacatc catcaagaca gagccagtta
 600
 cagacgaacc acccccagga ctcggtccgt ctgtcactct gaccatcaca gccatctcca
 660
 ccncggttg aaaaggagga acctcctctg gaaatgaaca ctggggttga ttctcgtgc
 720
 cagaccatta ttctaaaat taagctggag cctcatgaag tggatcagtt tctaaacttc
 780
 tctctaaaag aaggtctgtc tngccctccc tgtgtccctt tgggttatgg atatggtctc
 840
 tgggtctaca gagaggggaat atggcgagag agctgggatg agtttgtaac acagatgttg
 900
 tagctggctt tatgaaatag ctctgttctt aaaaaataaa aattttgctt ccaaataaa
 959

<210> 3410

<211> 144

<212> PRT

<213> Homo sapiens

<400> 3410

Met	Glu	Val	Leu	Glu	Ser	Gly	Glu	Gln	Gly	Val	Leu	Gln	Trp	Asp	Arg
1			5						10					15	
Lys	Leu	Ser	Glu	Leu	Ser	Glu	Pro	Gly	Asp	Gly	Glu	Ala	Leu	Met	Tyr
			20					25					30		
His	Thr	His	Phe	Ser	Glu	Leu	Leu	Asp	Glu	Phe	Ser	Gln	Asn	Val	Leu
			35				40					45			
Gly	Gln	Leu	Leu	Asn	Asp	Pro	Phe	Leu	Ser	Glu	Lys	Ser	Val	Ser	Met
			50			55					60				
Glu	Val	Glu	Pro	Ser	Pro	Thr	Ser	Pro	Ala	Pro	Leu	Ile	Gln	Ala	Glu
					70					75					80
His	Ser	Tyr	Ser	Leu	Cys	Glu	Glu	Pro	Arg	Ala	Gln	Ser	Pro	Phe	Thr
				85				90						95	
His	Ile	Thr	Thr	Ser	Asp	Ser	Phe	Asn	Asp	Asp	Glu	Val	Glu	Ser	Xaa
			100					105					110		
Arg	Asn	Gly	Thr	Cys	Leu	Gln	Thr	Ser	Leu	Gln	His	Pro	Ser	Arg	Gln
		115				120					125				
Ser	Gln	Leu	Gln	Thr	Asn	His	Pro	Gln	Asp	Ser	Phe	Arg	Leu	Ser	Leu
		130				135					140				

<210> 3411

<211> 958

<212> DNA

<213> Homo sapiens

<400> 3411

nngcgcgccg gttttgttgt tattgcgagg gggtcgcggt ggggcggggc agtgaccccc
 60
 ggccggccgt tgtgccctca tccctccac ccttccttcg tatagcttcc tttctctca
 120
 cgacggcctc cacagtcgg agcccgccg agcccgacc tggcggggag agctgcctcc
 180
 acggccgggc acccagaccc caccgtcgca gtcgccacca cctcagtcca tccttggtac
 240
 cggcaatggg cttcgtatcc tccagtgcac ttgtaactga cttggacacg gaataactaag
 300
 aactcacttc tgtcctcatc ccagtcgcgc cggcggtgac catctcggct cttttgggct
 360
 taactgccgc tcctctggac tctgtctgac tttgggggca ccatggacca aagtgggatg
 420
 gagattcctg tgacctcat cattaaagca ccgaatcaga aatacagtga ccagactatt
 480
 agctgcttct tgaactggac cgtggggaaa ctaaaaacgc atctatctaa cgtttacct
 540
 agcaaaccat tgacgaagga tcagagattg gtgtattcgg gcagactgct tcccgatcat
 600
 ctgcagctga aagacattct cagaaaaca gatgagtatc atatggttca tctagtatgt
 660
 acttctcgga ctctccag ttctccaaa tccagcacca atagagaaag tcatgaagca
 720
 ttggcatcca gcagcaattc tagttcagat cattcaggat caacaactcc atcatctggt
 780
 caagaaacct tgtctttagc tgtgggttct tcctcagaag gattgaggca gcgtaccctt
 840
 ccacaagcac aaactgacca agcacagagt caccagtttc catatgtaat gcaaggaaat
 900
 gtagacaacc aatttcctgg gcaagctgct ccacctggat tcccagtgtg tcccgcg
 958

<210> 3412

<211> 185

<212> PRT

<213> Homo sapiens

<400> 3412

Met	Asp	Gln	Ser	Gly	Met	Glu	Ile	Pro	Val	Thr	Leu	Ile	Ile	Lys	Ala
1				5					10					15	
Pro	Asn	Gln	Lys	Tyr	Ser	Asp	Gln	Thr	Ile	Ser	Cys	Phe	Leu	Asn	Trp
		20						25					30		
Thr	Val	Gly	Lys	Leu	Lys	Thr	His	Leu	Ser	Asn	Val	Tyr	Pro	Ser	Lys
		35					40					45			
Pro	Leu	Thr	Lys	Asp	Gln	Arg	Leu	Val	Tyr	Ser	Gly	Arg	Leu	Leu	Pro
		50				55					60				
Asp	His	Leu	Gln	Leu	Lys	Asp	Ile	Leu	Arg	Lys	Gln	Asp	Glu	Tyr	His
65				70					75					80	
Met	Val	His	Leu	Val	Cys	Thr	Ser	Arg	Thr	Pro	Pro	Ser	Ser	Pro	Lys
			85					90						95	
Ser	Ser	Thr	Asn	Arg	Glu	Ser	His	Glu	Ala	Leu	Ala	Ser	Ser	Ser	Asn

			100					105					110				
Ser	Ser	Ser	Asp	His	Ser	Gly	Ser	Thr	Thr	Pro	Ser	Ser	Gly	Gln	Glu		
		115					120					125					
Thr	Leu	Ser	Leu	Ala	Val	Gly	Ser	Ser	Ser	Glu	Gly	Leu	Arg	Gln	Arg		
	130					135					140						
Thr	Leu	Pro	Gln	Ala	Gln	Thr	Asp	Gln	Ala	Gln	Ser	His	Gln	Phe	Pro		
145					150					155					160		
Tyr	Val	Met	Gln	Gly	Asn	Val	Asp	Asn	Gln	Phe	Pro	Gly	Gln	Ala	Ala		
			165						170					175			
Pro	Pro	Gly	Phe	Pro	Val	Tyr	Pro	Ala									
		180					185										

<210> 3413

<211> 3344

<212> DNA

<213> Homo sapiens

<400> 3413

```

nntcagaac tatttcttga gtccgttctt ctcagagttt attacttctt cccacgtctt
60
ggtctgctgg tctaattccc ttcaataacc ttcaacatag gaaaaaacca gagtgtgttg
120
tgtgtcttta aagatattag agaagtggga gctgttgccc caaaactgtt ttcttatgta
180
gctactgaag gaacagaaag caggaagaaa gaaaaaagtt agttgtggcc ccagaagagt
240
tgtttttcaa atgccgagcc gtgaagcctc atgcactcaa cacaagttt ttctttcata
300
tagataagcc tgaagaaaaa agaataagcc tgagtatgta ttttaggtgt ccaactatcc
360
attaccaaga agaaatctat tcgtttgagc ctgagacact ctttgaggta aaaaattaga
420
atgaaagaac ctttggtatg tgaatgtggc aaagcagtgg taccacagca ggagcttctg
480
gacaaaatta aagaagaacc agacaatgct caagagtatg gatgtgtcca acagccaaaa
540
actcaagaaa gtaaattgaa aattggtggt gtgtcttcag ttaatgagag acctattgcc
600
cagcagttga acccaggctt tcagctttct tttgcatcat ctggcccaag tgtgttgctt
660
ccttcagttc cagctgttgc tattaagggt ttttgttctg gttgtaaaaa aatgctttat
720
aagggccaaa ctgcatatca taagacagga tctactcagc tcttctgctc cacacgatgc
780
atcaccagac attcttcacc tgcttgctg ccacctcctc ccaagaaaac ctgcacaaac
840
tgctcgaaag acatttttaa tctaaggat gtgatcacia ctgcctttga gaattcctat
900
cctagcaaag atttctgcag ccaatcatgc ttgtcatctt atgagctaaa gaaaaaacct
960
gttgttacca tatataccaa aagcatttca actaagtgc gtatgtgtca gaagaatgct
1020
gatactcgat ttgaagttaa atatcaaaat gtggtacatg gtctttgtag tgatgcctgt
1080

```

ttttcaaaat ttcactctac aaacaacctc accacgaact gttgtgagaa ctgtgggagc
1140
tattgtctata gtagctctgg tccttgccaa tcccagaagg tttttagttc aacaagtgtc
1200
acggcataca agcagaattc tgcccaaatt cctccatg ccttggggaa gtcattgaga
1260
tcctcagcag aaatgattga aaataccaat agcttgggga agacagagct tttctgttct
1320
attaattgct tatctgctta cagagttaag actgttactt ctgcagggtg ccagggttca
1380
tgtcatagtt gtaaaacctc agcaatccct cagtatcacc tagccatgtc agatggaact
1440
atatacagct tctgcagctc cagttgtgtg gttgctttcc agaattgtatt tagcaagcca
1500
aaaggaacaa actcttcggc ggtgccccctg tctcagggcc aagtgggtgt aagccccccc
1560
tcctccaggt cagcagtgat aataggagga ggtaacacct ctgccgtttc cccagctcc
1620
atccgtggct ctgctgcagc cagcctccaa cctcttggtg aacaatccca gcaagttgct
1680
ttaaccata cagttgttaa actcaagtgt cagcactgta accatctatt tgccacaaaa
1740
ccagaacttc ttttttaciaa gggtaaaatg tttctgtttt gtggcaagaa ttgctctgat
1800
gaatacaaga agaaaaataa agttgtggca atgtgtgaat attgtaaaat tgagaaaatt
1860
gtaaaggaga ctgttcggtt ctcagggtgct gacaagtcac tctgtagtga aggttgcaaa
1920
ttgctttata aacatgactt ggcaaaacgc tggggaaatc actgcaaaat gtgcagctac
1980
tgttcacaga catcccaaaa tttggtacag aatcgattgg agggcaagtt agaagagttt
2040
tgttgtgaag attgtatgtc caaatttaca gttctgtttt atcagatggc caagtgtgat
2100
ggttgtaaac gacagggtaa actaagcgag tccataaagt ggcgaggcaa cattaacat
2160
ttctgtaacc tattttgtgt cttggagttt tgtcatcagc aaattatgaa tgactgtctt
2220
ccacaaaata aagtaaatat ttctaaagca aaaactgctg tgacggagct cccttctgca
2280
aggacagata caacaccagt tataaccagt gtgatgtcat tggcaaaaat acctgctacc
2340
ttatctacag ggaacactaa cagtgtttta aaagggtgcag ttactaaaga ggcagcaaag
2400
atcattcaag atgaaagtac acaggaagat gctatgaaat ttccatcttc ccaatcttcc
2460
cagccttcca ggctttttaa gaacaaaggc atatcatgca aaccggtcac acagaccaag
2520
gccacttctt gcaaaccaca tacacagcac aaagaatgtc agacagaatg ccctgttcgt
2580
gcagtttgct gaggtgttcc cgctgaagggt atttggctac cagccagatc ccctgaacta
2640
ccaaatagct gtgggcttcc tggaactgct ggctgggttg ctgctgggtca tgggccacc
2700

gatgctgcaa gagatcagta acttggtctt gattctgctc atgatggggg ctatcttcac
 2760
 cttggcagct ctgaaagagt cactaagcac ctgtatccca gccattgtct gcctgggggt
 2820
 cctgctgctg ctgaatgtcg gccagctctt agcccagact aagaagggtg tcagaccac
 2880
 taggaagaag actctaagta cattcaagga atcctggaag tagagcatct ctgtctcttt
 2940
 atgccatgca gctgtcacag caggaacatg gtagaacaca gagtctatca tcttgttacc
 3000
 agtataatat ccagggtcag ccagtgttga aagagacatt ttgtctacct ggcaactgctt
 3060
 tctcttttta gctttactac tcttttgtga ggagtacatg ttatgcatat taacattcct
 3120
 catgtcatat gaaaatacaa aataagcaga aaagaaattt aaatcaacca aaattctgat
 3180
 gcccacaata accactttta atgccttggg gtaagtatac ctctgaactt tttctgtgc
 3240
 ctttaaacag atatatatct tttttaaatg aaaataaaac catatatcct attttatttc
 3300
 ctctttttaa aaccttataa actataacac tgtaaaaaaa aaaa
 3344

<210> 3414

<211> 723

<212> PRT

<213> Homo sapiens

<400> 3414

Met	Lys	Glu	Pro	Leu	Asp	Gly	Glu	Cys	Gly	Lys	Ala	Val	Val	Pro	Gln
1				5					10					15	
Gln	Glu	Leu	Leu	Asp	Lys	Ile	Lys	Glu	Glu	Pro	Asp	Asn	Ala	Gln	Glu
		20						25				30			
Tyr	Gly	Cys	Val	Gln	Gln	Pro	Lys	Thr	Gln	Glu	Ser	Lys	Leu	Lys	Ile
	35						40				45				
Gly	Gly	Val	Ser	Ser	Val	Asn	Glu	Arg	Pro	Ile	Ala	Gln	Gln	Leu	Asn
	50					55				60					
Pro	Gly	Phe	Gln	Leu	Ser	Phe	Ala	Ser	Ser	Gly	Pro	Ser	Val	Leu	Leu
65					70				75					80	
Pro	Ser	Val	Pro	Ala	Val	Ala	Ile	Lys	Val	Phe	Cys	Ser	Gly	Cys	Lys
			85						90					95	
Lys	Met	Leu	Tyr	Lys	Gly	Gln	Thr	Ala	Tyr	His	Lys	Thr	Gly	Ser	Thr
			100					105					110		
Gln	Leu	Phe	Cys	Ser	Thr	Arg	Cys	Ile	Thr	Arg	His	Ser	Ser	Pro	Ala
		115					120					125			
Cys	Leu	Pro	Pro	Pro	Pro	Lys	Lys	Thr	Cys	Thr	Asn	Cys	Ser	Lys	Asp
	130					135					140				
Ile	Leu	Asn	Pro	Lys	Asp	Val	Ile	Thr	Thr	Arg	Phe	Glu	Asn	Ser	Tyr
145					150				155					160	
Pro	Ser	Lys	Asp	Phe	Cys	Ser	Gln	Ser	Cys	Leu	Ser	Ser	Tyr	Glu	Leu
			165					170					175		
Lys	Lys	Lys	Pro	Val	Val	Thr	Ile	Tyr	Thr	Lys	Ser	Ile	Ser	Thr	Lys
			180					185					190		
Cys	Ser	Met	Cys	Gln	Lys	Asn	Ala	Asp	Thr	Arg	Phe	Glu	Val	Lys	Tyr

		195					200					205				
Gln	Asn	Val	Val	His	Gly	Leu	Cys	Ser	Asp	Ala	Cys	Phe	Ser	Lys	Phe	
	210					215					220					
His	Ser	Thr	Asn	Asn	Leu	Thr	Thr	Asn	Cys	Cys	Glu	Asn	Cys	Gly	Ser	
225					230					235					240	
Tyr	Cys	Tyr	Ser	Ser	Ser	Gly	Pro	Cys	Gln	Ser	Gln	Lys	Val	Phe	Ser	
					245				250					255		
Ser	Thr	Ser	Val	Thr	Ala	Tyr	Lys	Gln	Asn	Ser	Ala	Gln	Ile	Pro	Pro	
			260				265						270			
Tyr	Ala	Leu	Gly	Lys	Ser	Leu	Arg	Ser	Ser	Ala	Glu	Met	Ile	Glu	Asn	
		275					280					285				
Thr	Asn	Ser	Leu	Gly	Lys	Thr	Glu	Leu	Phe	Cys	Ser	Ile	Asn	Cys	Leu	
	290					295				300						
Ser	Ala	Tyr	Arg	Val	Lys	Thr	Val	Thr	Ser	Ala	Gly	Val	Gln	Val	Ser	
305					310					315					320	
Cys	His	Ser	Cys	Lys	Thr	Ser	Ala	Ile	Pro	Gln	Tyr	His	Leu	Ala	Met	
				325					330					335		
Ser	Asp	Gly	Thr	Ile	Tyr	Ser	Phe	Cys	Ser	Ser	Ser	Cys	Val	Val	Ala	
			340				345						350			
Phe	Gln	Asn	Val	Phe	Ser	Lys	Pro	Lys	Gly	Thr	Asn	Ser	Ser	Ala	Val	
		355					360					365				
Pro	Leu	Ser	Gln	Gly	Gln	Val	Val	Val	Ser	Pro	Pro	Ser	Ser	Arg	Ser	
	370					375					380					
Ala	Val	Ser	Ile	Gly	Gly	Gly	Asn	Thr	Ser	Ala	Val	Ser	Pro	Ser	Ser	
385				390						395					400	
Ile	Arg	Gly	Ser	Ala	Ala	Ala	Ser	Leu	Gln	Pro	Leu	Gly	Glu	Gln	Ser	
				405					410					415		
Gln	Gln	Val	Ala	Leu	Thr	His	Thr	Val	Val	Lys	Leu	Lys	Cys	Gln	His	
			420					425					430			
Cys	Asn	His	Leu	Phe	Ala	Thr	Lys	Pro	Glu	Leu	Leu	Phe	Tyr	Lys	Gly	
		435					440					445				
Lys	Met	Phe	Leu	Phe	Cys	Gly	Lys	Asn	Cys	Ser	Asp	Glu	Tyr	Lys	Lys	
	450					455				460						
Lys	Asn	Lys	Val	Val	Ala	Met	Cys	Glu	Tyr	Cys	Lys	Ile	Glu	Lys	Ile	
465				470						475					480	
Val	Lys	Glu	Thr	Val	Arg	Phe	Ser	Gly	Ala	Asp	Lys	Ser	Phe	Cys	Ser	
				485					490					495		
Glu	Gly	Cys	Lys	Leu	Leu	Tyr	Lys	His	Asp	Leu	Ala	Lys	Arg	Trp	Gly	
			500					505					510			
Asn	His	Cys	Lys	Met	Cys	Ser	Tyr	Cys	Ser	Gln	Thr	Ser	Pro	Asn	Leu	
		515					520					525				
Val	Gln	Asn	Arg	Leu	Glu	Gly	Lys	Leu	Glu	Glu	Phe	Cys	Cys	Glu	Asp	
	530					535					540					
Cys	Met	Ser	Lys	Phe	Thr	Val	Leu	Phe	Tyr	Gln	Met	Ala	Lys	Cys	Asp	
545				550						555					560	

625		630		635		640									
Leu	Ser	Thr	Gly	Asn	Thr	Asn	Ser	Val	Leu	Lys	Gly	Ala	Val	Thr	Lys
				645					650					655	
Glu	Ala	Ala	Lys	Ile	Ile	Gln	Asp	Glu	Ser	Thr	Gln	Glu	Asp	Ala	Met
			660					665					670		
Lys	Phe	Pro	Ser	Ser	Gln	Ser	Ser	Gln	Pro	Ser	Arg	Leu	Leu	Lys	Asn
		675				680					685				
Lys	Gly	Ile	Ser	Cys	Lys	Pro	Val	Thr	Gln	Thr	Lys	Ala	Thr	Ser	Cys
	690				695					700					
Lys	Pro	His	Thr	Gln	His	Lys	Glu	Cys	Gln	Thr	Glu	Cys	Pro	Val	Arg
705				710					715					720	
Ala	Val	Cys													

<210> 3415

<211> 3501

<212> DNA

<213> Homo sapiens

<400> 3415

```

ngcagccccg gcggccgaac gcccgcggcg cgggactcca tcgtcagaga agtcattcag
60
aattcaaaag aagttctaag tttattgcaa gaaaaaaacc ctgccttcaa gccggttctt
120
gcaattatcc aggcaggtga cgacaacttg atgcaggaaa tcaaccagaa tttggctgag
180
gaggctggtc tgaacatcac tcacatttgc ctccctccag atagcagtga agccgagatt
240
atagatgaaa tcttaaagat caatgaagat accagagtac atggccttgc ccttcagatc
300
tctgagaact tgtttagcaa caaagtcctc aatgccttga aaccagaaaa agatgtggat
360
ggagtaacag acataaacct ggggaagctg gtgcgagggg atgcccatga atgttttgtt
420
tcacctgttg ccaaagctgt aattgaactt cttgaaaaat cagtaggtgt caacctagat
480
ggaaagaaga ttttggtagt gggggcccat gggctcttgg aagctgctct acaatgcctg
540
ttccagagaa aagggtccat gacaatgagc atccagtgga aaacacgcca gcttcaaagc
600
aagcttcacg aggetgacat tgtggtccta ggctcaccta agccagaaga gattcccctt
660
acttggtac aaccaggaac tactgttctc aactgctccc atgacttcoct gtcaggggaag
720
gttggtgtg gctctccaag aatanncatt ttggtggact cattgaggaa gatgatgtga
780
ttcntccttg ctgcagctct gcgaattcag aacatgggtca gtagtggaag gagatggctt
840
cgtgaacagc agcacaggcg gtggagactt cactgcttga aacttcagcc tctctcccct
900
gtgccaaagt acattgagat ttcaagagga caaactccaa aagctgtgga tgtccttgcc
960
aaggagattg gattgcttgc agatgaaatt gaaatctatg gcaaaagcaa agccaaagta
1020

```

cgtttgtccg tgctagaaaag gttaaaggat caagcagatg gaaaatacgt cttagttgct
1080
gggatcacac ccacccctct tggagaaggg aagagcacag tcaccatcgg gcttgtgcag
1140
gctctgaccg cacacctgaa tgtcaactcc tttgcctgct tgaggcagcc ttcccaagga
1200
ccgacgtttg gagtgaaggg aggagccgcg ggtggtggat atgccaggt catcccatg
1260
gaggagttca accttcactt gactggagac atccacgcca tcaccgctgc caataacttg
1320
ctggctgccg ccatcgacac gaggattctt catgaaaaca cgcaaacaga taaggctctg
1380
tataatcggc tggttccttt agtgaatggt gtcagagaat tttcagaaat tcagcttgct
1440
cggctaaaaa aactgggaat aaataagact gatccgagca cactgacaga agaggaagtg
1500
agtaaatttg cccgtctcga catcgaccca tctaccatca cgtggcagag agtattggat
1560
acaaatgacc gatttctacg aaaaataacc atcgggcagg gaaacacaga gaagggccat
1620
taccggcagg cgcagtttga catcgcagtg gccagcgaga tcatggcggt gctggccctg
1680
acggacagcc tcgcagacat gaaggcacgg ctgggaagga tgggtggtggc cagtgacaaa
1740
agcgggcagc ctgtgacagc agatgatttg ggggtgacag gtgctttgac agttttgatg
1800
aaagatgcaa taaaaccaa cctgatgcag accctggaag ggacacctgt gttcgtgcat
1860
gcggggccctt ttgctaacat tgctcacggc aactcttcag tgttggtgta taaaattgcc
1920
ctgaaactgg ttggtgaaga aggatttgta gtgaccgaag ctggcttttg tgctgacatc
1980
ggaatggaga aattcttcaa catcaagtgc cgagcttccg gcttgggtgcc caacgtggtt
2040
gtgttagtgg caacggtgcg agctctgaag atgcatggag gcgggccaag tgtaacggct
2100
ggtgttcctc ttaagaaaga atatacagag gagaacatcc agctggtggc agacggctgc
2160
tgtaacctcc agaagcaa atcagatcact cagctctttg gggttcccg tgtggtggct
2220
ctgaatgtct tcaagaccga caccgcgct gagattgact tgggtgtgta gcttgcaaag
2280
cgggctggtg cctttgatgc agtcccctgc tatcactggt cgggttggtg aaaaggatcg
2340
gtggacttgg ctccggctgt gagagaggct gcgagtaaaa gaagccgatt ccagttcctg
2400
tatgatgttc aggttccaat tgtggacaag ataaggacca ttgctcaggc tgtctatgga
2460
gccaaagata ttgaactctc tcctgaggca caagccaaaa tagatcgta cactcaacag
2520
ggttttggaa atttgcccat ctgcatggca aagaccaccc tttctctatc tcaccaacct
2580
gacaaaaaag gtgtgccaag ggacttcac ttacctatca gtgacgtccg ggccagcata
2640

ggcgctgggt tcatttacct tttggtcgga acgatgagca ccatgccagg actgcccacc
 2700
 cggccctgct tttatgacat agatcttgat accgaaacag aacaagttaa aggcttggtc
 2760
 taagtggaca aggtctctac aggacccgat gcagactcct gaaacagact actctttgcc
 2820
 tttttgctgc agttggagaa gaaactgaat ttgaaaaatg tctgttatgc aatgctggag
 2880
 acatggtgaa ataggccaaa gatttcttct tcgttcaaga tgaattctgt tcacagtgga
 2940
 gtatggtggt cggaacaaagg acctccacca agactgaaag aaactaattt atttctgttt
 3000
 ctgtggagtt tccattatct ctactgctta cactttagaa tgtttatctt atgggggacta
 3060
 agggattagg agtgtgaact aaaaggtaac attttccact ctcaagtttt ctactttgtc
 3120
 tttgaactga aaataaacat ggatctagaa aaccaaccag caagttttca gtgccagata
 3180
 aaactctgct ctctagaggt aactcctcat gggaggcagc taggagtgtt acctgacacc
 3240
 agtttcttag aaaactgtga caagcaaagc aataacacac gtcgagaaat atctgatcaa
 3300
 gcgggaaatc ttctgactgt cggggatctc tagtaagatc tcttggaatg aagtgcactg
 3360
 tgtatccaaa actattttcc agcgccagtg aagttgctct tacctaaaac aaatggggtt
 3420
 atgctagttt ccaccaagga atgagtctcg atggccatta aactttctaa gcgcacaggg
 3480
 ctaggaaaag tcaaaaaaaaa a
 3501

<210> 3416

<211> 259

<212> PRT

<213> Homo sapiens

<400> 3416

Xaa	Ser	Pro	Gly	Arg	Thr	Pro	Ala	Ala	Arg	Asp	Ser	Ile	Val	Arg
1			5				10					15		
Glu	Val	Ile	Gln	Asn	Ser	Lys	Glu	Val	Leu	Ser	Leu	Leu	Gln	Lys
		20					25				30			
Asn	Pro	Ala	Phe	Lys	Pro	Val	Leu	Ala	Ile	Ile	Gln	Ala	Gly	Asp
		35				40				45				
Asn	Leu	Met	Gln	Glu	Ile	Asn	Gln	Asn	Leu	Ala	Glu	Glu	Ala	Gly
	50					55				60				
Asn	Ile	Thr	His	Ile	Cys	Leu	Pro	Pro	Asp	Ser	Ser	Glu	Ala	Glu
65				70					75				80	
Ile	Asp	Glu	Ile	Leu	Lys	Ile	Asn	Glu	Asp	Thr	Arg	Val	His	Gly
		85					90					95		
Ala	Leu	Gln	Ile	Ser	Glu	Asn	Leu	Phe	Ser	Asn	Lys	Val	Leu	Asn
		100					105					110		
Leu	Lys	Pro	Glu	Lys	Asp	Val	Asp	Gly	Val	Thr	Asp	Ile	Asn	Leu
	115						120					125		
Lys	Leu	Val	Arg	Gly	Asp	Ala	His	Glu	Cys	Phe	Val	Ser	Pro	Val

130		135		140
Lys Ala Val Ile Glu Leu	Leu Glu Lys Ser Val Gly Val Asn Leu Asp			
145		150		155
Gly Lys Lys Ile Leu Val Val Gly Ala His Gly Ser Leu Glu Ala Ala				160
		165		170
Leu Gln Cys Leu Phe Gln Arg Lys Gly Ser Met Thr Met Ser Ile Gln				175
		180		185
Trp Lys Thr Arg Gln Leu Gln Ser Lys Leu His Glu Ala Asp Ile Val				190
		195		200
Val Leu Gly Ser Pro Lys Pro Glu Glu Ile Pro Leu Thr Trp Ile Gln				205
		210		215
Pro Gly Thr Thr Val Leu Asn Cys Ser His Asp Phe Leu Ser Gly Lys				220
225		230		235
Val Gly Cys Gly Ser Pro Arg Ile Xaa Ile Leu Val Asp Ser Leu Arg				240
		245		250
				255
Lys Met Met				

<210> 3417
 <211> 405
 <212> DNA
 <213> Homo sapiens

<400> 3417
 gggggggcg cctgagaaga tattatggct gctgccacgg agcataatcg cccgagcagc
 60
 ggtgacagga acctggagcg aagatgcagc cccaacctct cccgagaggt gctctacgaa
 120
 atctttcgct ccctacacac cctgggttga cagcttgacc tcagagatga tgtggtgaaa
 180
 attacaatcg attggaacaa gctccagagc ctctcgcat tccagcctgc attgctcttt
 240
 agtgacttg aacaacacat tttatattta caggtaaatt tcttgtaga aatgataacc
 300
 cgatattgaa aatagaaatt gattgtggtt aagttagttg gagtatttga cagttctaaa
 360
 cactatatta atagtgttgc taataaaaacg ttatttacat ccgga
 405

<210> 3418
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 3418
 Met Ala Ala Ala Thr Glu His Asn Arg Pro Ser Ser Gly Asp Arg Asn
 1 5 10 15
 Leu Glu Arg Arg Cys Ser Pro Asn Leu Ser Arg Glu Val Leu Tyr Glu
 20 25 30
 Ile Phe Arg Ser Leu His Thr Leu Val Gly Gln Leu Asp Leu Arg Asp
 35 40 45
 Asp Val Val Lys Ile Thr Ile Asp Trp Asn Lys Leu Gln Ser Leu Ser
 50 55 60
 Ala Phe Gln Pro Ala Leu Leu Phe Ser Ala Leu Glu Gln His Ile Leu

```

65          70          75          80
Tyr Leu Gln Val Asn Phe Leu Leu Glu Met Ile Thr Arg Tyr
          85          90

```

```
<210> 3419
<211> 418
<212> DNA
<213> Homo sapiens
```

```
<400> 3419
ccccgggcctc ccacctctct aacgggttcac acctgaccgcg tcccatcctg cccactcccg
60
ccgtgggcacc cactgggtctg ctgggcctcc aggtctctccc tgttctggat gtttcattgtt
120
aatgggggcta cgtcgcgtga cctcacgtgt ggttcctctg agcgtagtgc tttccagggc
180
aaccgtgtca cagtgcagat ggacgcacgg acggcgggtga gcctttaacg ccaagcaaca
240
agtcccattg tggacggagg tttgcatttc tcctgggtcc acatctatgg tgcccccata
300
gggcgccttg aggtctgcgc cggtcaggct tgccatttct ggggaagagg actggggggg
360
agccttctgc cccattacc accgccatt ccctgggcgc tctcggagag aggtcgga
418
```

```
<210> 3420
<211> 105
<212> PRT
<213> Homo sapiens
```

```

<400> 3420
Met Ala Ser Leu Thr Gly Ala Ser Leu Lys Ala Pro Tyr Gly Gly Thr
 1          5          10          15
Ile Asp Val Asp Pro Gly Glu Met Gln Thr Ser Val His Asn Gly Thr
          20          25          30
Cys Cys Leu Ala Leu Lys Ala His Arg Arg Pro Cys Val His Leu His
          35          40          45
Cys Asp Thr Val Ala Leu Glu Ser Thr Thr Leu Arg Gly Thr Thr Arg
          50          55          60
Glu Val Thr Arg Arg Ser Pro Ile Asn Met Lys His Pro Glu Gln Gly
65          70          75          80
Glu Pro Gly Gly Pro Ala Asp Gln Trp Val Pro Arg Arg Glu Trp Ala
          85          90          95
Gly Trp Asp Gly Ser Gly Val Asn Arg
          100          105

```

```
<210> 3421
<211> 2988
<212> DNA
<213> Homo sapiens
```

```
<400> 3421
ggatcccgagg acaggaaagg aggactggag aaacgccatg ctctgcatca cgagggtcgc
60
```

catcctgtgt aatcgatagg agaaagtcag gatgagctgc acaccgagaa cgtgctccgt
120
ggactgcagg ggaagctcca gcttaaaatg taacatgtcc gtcttcccat cctggttcct
180
gtcttcttct ctagtcgaaa cgagcgggac gcgcaggcga tccccctgca gccagttacc
240
gcgcgggggt ctgctccaaa gccgcgctgt tcctgctgct ggccgctgcg ctcacgtaca
300
tcccgccgct gctggtggcc ttccggagcc acgggttttg gctgaagcgg agcagctacg
360
aggagcagcc gaccgtgcgc ttccaacacc aggtgctgct cgtggccctg ctcggaccgg
420
aaagcgacgg gttcctcgcc tggagcacgt tcccggcctt caaccggctg caaggggac
480
gcctgcgcgt cccctcctt tcctggagga aattatgccc gttgtgtaca gcaagacagt
540
gggtcattgt gtatgtacag aagtgatgtg gattcctccc agactcatta gtgaccaggg
600
ctgctggggc tgtttgggtt tccctagact agagaagaag acaggaacca ggatgggaag
660
acggacatgt tacattttta gctggagctt cccctgcagt ccacggagca cgttctcggt
720
gtgcagctca tcctgacttt ctctatcgaa ttacacagga tggcgaccct cgtgatgcag
780
agcatggcgt ttctccagtc ctcttttctt gtccccgggat cccagttata cgtgaacgga
840
gacctgaggc tgcagcagaa gcagccgctg agctgtggtg gcctagatgc ccgatacaac
900
atatccgtga tcaacgggac cagccccctt gcctatgact acgacctcac ccatattgtt
960
gctgcctacc aggagaggaa cgaaagctcc cagtgaggaa ctggtcttct ggagactctg
1020
tgtggcatag agtgattcaa ccaccttaag aagacctctg gctttcctgg aacacagatg
1080
tcgagacatc tcccatggat ttgtgatcag cgttgacgt ctcccagcag cctggacgg
1140
tggccccag ccgcccgcgt gtggctgccg cgttctcca gcaagacagt gacagtgc
1200
ctcctggcac agaccacctg cctcctgctc ttcatcatct cccggccagg gccctcatcc
1260
ccagccggcg gcgaggatcg tgtgcacgtg ctggtgctgt cctcgtggcg ctcgggctca
1320
tccttcttgg gccagctctt cagccagcac cccgacgtct tctacctgat ggagcccgcg
1380
tggcatgtgt ggaccacct gtcgcagggc agcgcggcaa cgctgcacat ggccgtgcgc
1440
gacctgatgc gctctatctt tttgtgcgac atggacgtgt ttgatgccta catggaacct
1500
ggccccgga gacagtccag cctctttcag tgggagaaca gccgggccct gtgttctgca
1560
cctgcctgtg acatcatccc acaagatgaa atcatcccc gggtcactg caggctcctg
1620
tgcagtcaac agccctttga ggtggtggag aaggcctgcc gtcctacag ccacgtggtg
1680

ctcaaggagg tgcgcttctt caacctgcag tccctctacc cgctgctgaa agacccctcc
 1740
 ctcaacctgc atatcggtga cctgggtccgg gacccccggg ccgtgctgag ctcccgggag
 1800
 gcggcggggc cgatactggc acgcgacaac ggcacgtgc tgggcaccaa cggcaagtgg
 1860
 gtggaggccg accctcacct ggcctgatt cgcgaggtgt gccgcagcca cgtgcgcatc
 1920
 gccgaggccg ccacactcaa gccgccacc ttcctgcgcg gccgctaccg cctgggtgcgc
 1980
 ttcgaggacc tggcgcgggg gccgctggca gagatccgcg cactctacgc cttcacccggc
 2040
 ctgacctca cgccacagct cgaggcctgg atccacaaca tcacccacgg gtcggggatc
 2100
 ggcaagccaa tcgaggcctt ccatacttcg tctaggaatg cgcgcaacgt ctcccaggcc
 2160
 tggcgccacg cgttgccctt caataagatc ctgcgcgtgc aggaggtgtg cgccggcgcg
 2220
 ctgcagctgc tgggctaccg gcctgtgtac tctgcggacc agcagcgtga cctcacccctg
 2280
 gatctggtgc tgccacgagg ccagaccac ttcagctggg catcgctga ctgagaactc
 2340
 tgggccttag agcaagcccc gaactgtggt cgccaggccc aggaggcgac tgcattggtg
 2400
 agaggaggct ggggcgcagtg gggaagcagg tccctactat caaccgggag tttgggggtcc
 2460
 tccctgaag taggcaagga ctgcacgttt ctttctctcc tgattctcgg ttttcctttg
 2520
 agtcttctgg agctgccttc tcatcagggt cactcttcat ggaaagcaac tcttgccctt
 2580
 acctcttctg ggcgagggga gtaagttact gctaaattaa attaaatgtg tgccaggccg
 2640
 ggtgcggtgg ctcatgcctg taatcccagc attttgagag gctgaggcgg gtggatcacc
 2700
 tgaggtcagg attcaaaacc agcctggcca acatagtga accccctctc tactaaaaat
 2760
 gcaaaaatta gtccggcgtg gtggcacact cctgtaatcc cagctactta ggaggctgag
 2820
 gtgggagaat cacttgact ccaaagggtg aggttgcagt aagctgaaat catgccactg
 2880
 caccctagct tgggtggcaa agcaaaactc tatcaaaaaa ataattaata aatttgttca
 2940
 aaagtcctgc cgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2988

<210> 3422

<211> 418

<212> PRT

<213> Homo sapiens

<400> 3422

Met	Ser	Arg	His	Leu	Pro	Trp	Ile	Cys	Asp	Gln	Arg	Cys	Ser	Ser	Pro
1				5				10					15		
Ser	Ser	Pro	Gly	Arg	Trp	Pro	Pro	Ala	Ala	Arg	Met	Trp	Leu	Pro	Arg

20							25					30				
Phe	Ser	Ser	Lys	Thr	Val	Thr	Val	Leu	Leu	Leu	Ala	Gln	Thr	Thr	Cys	
		35					40					45				
Leu	Leu	Leu	Phe	Ile	Ile	Ser	Arg	Pro	Gly	Pro	Ser	Ser	Pro	Ala	Gly	
	50					55					60					
Gly	Glu	Asp	Arg	Val	His	Val	Leu	Val	Leu	Ser	Ser	Trp	Arg	Ser	Gly	
65					70					75					80	
Ser	Ser	Phe	Leu	Gly	Gln	Leu	Phe	Ser	Gln	His	Pro	Asp	Val	Phe	Tyr	
				85					90					95		
Leu	Met	Glu	Pro	Ala	Trp	His	Val	Trp	Thr	Thr	Leu	Ser	Gln	Gly	Ser	
			100					105					110			
Ala	Ala	Thr	Leu	His	Met	Ala	Val	Arg	Asp	Leu	Met	Arg	Ser	Ile	Phe	
		115						120				125				
Leu	Cys	Asp	Met	Asp	Val	Phe	Asp	Ala	Tyr	Met	Glu	Pro	Gly	Pro	Arg	
	130					135					140					
Arg	Gln	Ser	Ser	Leu	Phe	Gln	Trp	Glu	Asn	Ser	Arg	Ala	Leu	Cys	Ser	
145					150					155					160	
Ala	Pro	Ala	Cys	Asp	Ile	Ile	Pro	Gln	Asp	Glu	Ile	Ile	Pro	Arg	Ala	
				165					170					175		
His	Cys	Arg	Leu	Cys	Ser	Gln	Gln	Pro	Phe	Glu	Val	Val	Glu	Lys		
			180					185				190				
Ala	Cys	Arg	Ser	Tyr	Ser	His	Val	Val	Leu	Lys	Glu	Val	Arg	Phe	Phe	
		195						200				205				
Asn	Leu	Gln	Ser	Leu	Tyr	Pro	Leu	Leu	Lys	Asp	Pro	Ser	Leu	Asn	Leu	
	210					215					220					
His	Ile	Val	His	Leu	Val	Arg	Asp	Pro	Arg	Ala	Val	Leu	Arg	Ser	Arg	
225					230					235					240	
Glu	Ala	Ala	Gly	Pro	Ile	Leu	Ala	Arg	Asp	Asn	Gly	Ile	Val	Leu	Gly	
				245					250					255		
Thr	Asn	Gly	Lys	Trp	Val	Glu	Ala	Asp	Pro	His	Leu	Arg	Leu	Ile	Arg	
			260					265					270			
Glu	Val	Cys	Arg	Ser	His	Val	Arg	Ile	Ala	Glu	Ala	Ala	Thr	Leu	Lys	
		275						280				285				
Pro	Pro	Pro	Phe	Leu	Arg	Gly	Arg	Tyr	Arg	Leu	Val	Arg	Phe	Glu	Asp	
	290					295					300					
Leu	Ala	Arg	Glu	Pro	Leu	Ala	Glu	Ile	Arg	Ala	Leu	Tyr	Ala	Phe	Thr	
305					310					315					320	
Gly	Leu	Thr	Leu	Thr	Pro	Gln	Leu	Glu	Ala	Trp	Ile	His	Asn	Ile	Thr	
				325					330					335		
His	Gly	Ser	Gly	Ile	Gly	Lys	Pro	Ile	Glu	Ala	Phe	His	Thr	Ser	Ser	
			340					345					350			
Arg	Asn	Ala	Arg	Asn	Val	Ser	Gln	Ala	Trp	Arg	His	Ala	Leu	Pro	Phe	
		355														

<210> 3423

<211> 1851

<212> DNA

<213> Homo sapiens

<400> 3423

cgatcgagag ctcgaatagc catcggtg cgtaccgcc actcaggtct gccttctacg
60
tctactggtt atggagcctg tctgtcactc ttctcgtcgt actaaccgc ttacccccgg
120
cgttcattgg ccgtggcctc tctagctccg cccctaggg gggtcgaccc cgtaaccagt
180
gaggcgcggg ccaacctagt gcgacgtgtg ggcgtggcgg gggctggggg ctgcgggcga
240
aggtaggtagc ccattggagg tcccgggagc gaagtccagc tgccgttagg cgctgggata
300
gtcgcacgct ggatgcatct acgtccgccg agcccctggg gcgaagaggc cgcgtccgcc
360
ttcagttgtg gccggtgctt cgccccctga cccttcgcc ccaaagacca gctctaactg
420
gagcgctcgc gccgccctgc cccagcctcg tacacgccgc cagcctcgcc cagccggtgt
480
ccggagaccc tcgggccgtg tccatttgtg ggcaaagcca gcggggcagg cttggccaga
540
gtgcaccact cggcgccgtc ccaggccga cgctctgggc gcgcccggaa ccccaggtta
600
atttgagtg gcccctggag tcagtttctt acaccatccg aggccccacc cagcacgagc
660
tacagcctcc accaggaggg cctggaaccc tcagcctgca cttcctcaac cctcaggaag
720
ctcagcggtg ggcagtccta gtccgaggtg ccaccgtgga aggacagaat ggcagcaaga
780
gcaactcacc accagccttg gggccagaag catgccctgt ctccctgcc agtcccccg
840
aagcctccac actcaagggc cctccacctg aggcagatct tcctaggagc cctggaaact
900
tgacggagag agaagagctg gcaggagacc tggcccgggc tattgcaggt ggagacgaga
960
agggggcagc ccaagtggca gccgtcctgg cccagcatcg tgtggcctg agtggtcagc
1020
ttcaggaggc ctgcttccca cctggcccca tcaggctgca ggtcacactt gaagacgctg
1080
cctctgccgc atccgccgcg tcctctgcac acgttgccct gcagggtccac cccactgca
1140
ctgttgagc tctccaggag caggtgggca cagggtctgg ggagccctgc caggggcaga
1200
ggagcctagg tgacatcacc tgccctgatg ctctggccac aggtgttctc agagctcgg
1260
ttcccgccag ccgtgcaacg ctgggtcacc ggacggtgcc tgtgtgtgcc tgagcgcagc
1320
cttgccctt acgggggttcg gcaggatggg gaccctgctt tcctctactt gctgtcagct
1380
cctcgagaag cccagccac aggacctagc cctcagcacc ccagaagat ggacggggaa
1440
cttgagcgt tgtttcccc atcattgggg ctacccccag gccccagcc agctgcctcc
1500

agcctgccca gtccactcca gcccagctgg tctgtcctt cctgcacctt catcaatgcc
 1560
 ccagaccgcc ctggctgtga gatgtgtagc acccagaggg cctgcacttg ggacccccctt
 1620
 gctgcagctt ccacctagca gccaccagag gttacaaggg gagagtggcc cttccctcac
 1680
 aagtcgcaca tctccaggcc cccactgaac tccggggacc tctactgact gcttgctggg
 1740
 acagtcacca ggggtggggg gaagggccac aaaatgaaac cattaagac ccttaagagc
 1800
 caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
 1851

<210> 3424

<211> 136

<212> PRT

<213> Homo sapiens

<400> 3424

Met	Leu	Trp	Pro	Gln	Val	Phe	Ser	Glu	Leu	Gly	Phe	Pro	Pro	Ala	Val
1				5				10						15	
Gln	Arg	Trp	Val	Ile	Gly	Arg	Cys	Leu	Cys	Val	Pro	Glu	Arg	Ser	Leu
	20						25				30				
Ala	Ser	Tyr	Gly	Val	Arg	Gln	Asp	Gly	Asp	Pro	Ala	Phe	Leu	Tyr	Leu
	35					40					45				
Leu	Ser	Ala	Pro	Arg	Glu	Ala	Pro	Ala	Thr	Gly	Pro	Ser	Pro	Gln	His
	50					55					60				
Pro	Gln	Lys	Met	Asp	Gly	Glu	Leu	Gly	Arg	Leu	Phe	Pro	Pro	Ser	Leu
65					70					75				80	
Gly	Leu	Pro	Pro	Gly	Pro	Gln	Pro	Ala	Ala	Ser	Ser	Leu	Pro	Ser	Pro
			85					90						95	
Leu	Gln	Pro	Ser	Trp	Ser	Cys	Pro	Ser	Cys	Thr	Phe	Ile	Asn	Ala	Pro
		100					105						110		
Asp	Arg	Pro	Gly	Cys	Glu	Met	Cys	Ser	Thr	Gln	Arg	Pro	Cys	Thr	Trp
	115						120					125			
Asp	Pro	Leu	Ala	Ala	Ala	Ser	Thr								
	130					135									

<210> 3425

<211> 1416

<212> DNA

<213> Homo sapiens

<400> 3425

tccggcggaagggtctttg ctgctgcgcc cgggcagggg ctgccgcggc cccaggtccc
 60
 gcttcgagac gcggcgcggt ccaggcgga ggcgactccc taggaaggga cccggggcgg
 120
 gaggaggaag tgaggccgcy cggaaggaag gcggcgagcc cgggggccc gaggccttgg
 180
 ccgcgtcaca gcacccacat ggctctgga gtgggcgcgg ccttcgagga actgcctcac
 240
 gacggcacgt gtgacgagtg cgagcccgac gaggctccgg gggccgagga agtgtgccga
 300

gaatgaggct tctgctactg ccgccgccat gccgaggcgc acaggcagaa gttcctcagt
 360
 caccatctgg ccgaatacgt ccacggctcc caggcctgga ccccgccagc tgacggagag
 420
 ggggcgggga aggaagaagc ggaggtcaag gtggagcagg agaggagat agaaagcgag
 480
 gcaggggaag agagtgagtc ggaggaagag agcgagtcag aggaagagag cgagacagag
 540
 gaagagagtg aggatgagag cgatgaggag agtgaagaag acagcgagga agaaatggag
 600
 gatgagcaag aaagcgaggc cgaagaagac aaccaagaag aaggggaatc cgaggcggag
 660
 ggagaaactg aggcagaaag tgaatttgac ccagaaatag aaatggaagc agagagagtg
 720
 gccaagagga agtgtccgga ccatgggctt gatttgagta cctattgcca ggaagatagg
 780
 cagctcatct gtgtcctgtg tccagtcatt ggggctcacc agggccacca actctccacc
 840
 ctagacgaag cctttgaaga attaagaagc aaagactcag gtggactgaa ggccgctatg
 900
 atcgaattgg tggaaaagggt gaagttcaag agctcagacc ctaaagtaac tcgggaccaa
 960
 atgaagatgt ttatacagca ggaatttaag aaagttcaga aagtgattgc tgatgaggag
 1020
 cagaaggccc ttcattctagt ggacatccaa gaggcaatgg ccacagctca tgtgactgag
 1080
 atactggcag acatccaatc ccacatggat aggttgatga ctcatgaggc ccaagccaag
 1140
 gaacaacttg atacctctaa tgaatcagct gagccaaagg cagagggcga tgaggaagga
 1200
 cccagtgggtg ccagtgaaga agaggacaca tgaaggcttg ctacccccag tgaaaatcat
 1260
 cccctccctt tgtgtgtatg tgacagcgtg tatgtaacgg cttctgattt ctgtgaaagc
 1320
 tgctcagcaa caaacgtact tccaccagat gtgtccccag atccacagca ggcacatata
 1380
 tctccaaggg atgaccagtt ttatgcttac tgtgtg
 1416

<210> 3426

<211> 410

<212> PRT

<213> Homo sapiens

<400> 3426

Ser Gly Gly Lys Gly Leu Cys Cys Cys Ala Arg Ala Gly Ala Ala Ala
 1 5 10 15
 Ala Pro Gly Pro Ala Ser Arg Arg Gly Ala Val Gln Ala Gly Gly Asp
 20 25 30
 Ser Leu Gly Arg Asp Pro Gly Arg Glu Glu Glu Val Arg Pro Arg Gly
 35 40 45
 Arg Lys Ala Ala Ser Pro Gly Ala Pro Arg Pro Trp Pro Arg His Ser
 50 55 60
 Thr His Met Ala Ser Gly Val Gly Ala Ala Phe Glu Glu Leu Pro His

65					70					75					80			
Asp	Gly	Thr	Cys	Asp	Glu	Cys	Glu	Pro	Asp	Glu	Ala	Pro	Gly	Ala	Glu			
				85					90					95				
Glu	Val	Cys	Arg	Glu	Cys	Gly	Phe	Cys	Tyr	Cys	Arg	Arg	His	Ala	Glu			
				100					105					110				
Ala	His	Arg	Gln	Lys	Phe	Leu	Ser	His	His	Leu	Ala	Glu	Tyr	Val	His			
				115					120					125				
Gly	Ser	Gln	Ala	Trp	Thr	Pro	Pro	Ala	Asp	Gly	Glu	Gly	Ala	Gly	Lys			
				130					135					140				
Glu	Glu	Ala	Glu	Val	Lys	Val	Glu	Gln	Glu	Arg	Glu	Ile	Glu	Ser	Glu			
145					150					155					160			
Ala	Gly	Glu	Glu	Ser	Glu	Ser	Glu	Glu	Glu	Ser	Glu	Ser	Glu	Glu	Glu			
				165					170					175				
Ser	Glu	Thr	Glu	Glu	Glu	Ser	Glu	Asp	Glu	Ser	Asp	Glu	Glu	Ser	Glu			
				180					185					190				
Glu	Asp	Ser	Glu	Glu	Glu	Met	Glu	Asp	Glu	Gln	Glu	Ser	Glu	Ala	Glu			
				195					200					205				
Glu	Asp	Asn	Gln	Glu	Glu	Gly	Glu	Ser	Glu	Ala	Glu	Gly	Glu	Thr	Glu			
				210					215					220				
Ala	Glu	Ser	Glu	Phe	Asp	Pro	Glu	Ile	Glu	Met	Glu	Ala	Glu	Arg	Val			
225					230					235					240			
Ala	Lys	Arg	Lys	Cys	Pro	Asp	His	Gly	Leu	Asp	Leu	Ser	Thr	Tyr	Cys			
				245					250					255				
Gln	Glu	Asp	Arg	Gln	Leu	Ile	Cys	Val	Leu	Cys	Pro	Val	Ile	Gly	Ala			
				260					265					270				
His	Gln	Gly	His	Gln	Leu	Ser	Thr	Leu	Asp	Glu	Ala	Phe	Glu	Glu	Leu			
				275					280					285				
Arg	Ser	Lys	Asp	Ser	Gly	Gly	Leu	Lys	Ala	Ala	Met	Ile	Glu	Leu	Val			
				290					295					300				
Glu	Arg	Leu	Lys	Phe	Lys	Ser	Ser	Asp	Pro	Lys	Val	Thr	Arg	Asp	Gln			
305					310					315					320			
Met	Lys	Met	Phe	Ile	Gln	Gln	Glu	Phe	Lys	Lys	Val	Gln	Lys	Val	Ile			
				325					330					335				
Ala	Asp	Glu	Glu	Gln	Lys	Ala	Leu	His	Leu	Val	Asp	Ile	Gln	Glu	Ala			
				340					345					350				
Met	Ala	Thr	Ala	His	Val	Thr	Glu	Ile	Leu	Ala	Asp	Ile	Gln	Ser	His			
				355					360					365				
Met	Asp	Arg	Leu	Met	Thr	Gln	Met	Ala	Gln	Ala	Lys	Glu	Gln	Leu	Asp			
				370					375					380				
Thr	Ser	Asn	Glu	Ser	Ala	Glu	Pro	Lys	Ala	Glu	Gly	Asp	Glu	Glu	Gly			
385					390					395					400			
Pro	Ser	Gly	Ala	Ser	Glu	Glu	Glu	Asp	Thr									
				405					410									

<210> 3427

<211> 580

<212> DNA

<213> Homo sapiens

<400> 3427

qqatcccctc tcttcaaaat tgtagacgcg tctccgagtc ctttcactca tcggaggctg

60

ccggatttca atgtcatagt tcccattgtc aatgacatca tcggagaact tgacctgctg

120

ggggtctggat tgagacttgg accttctgag cactggcaga tgtactggct tctcttcagg
 180
 caggatttttc tctggacaca actctgaact tagactcttt aaggactctg cactcctgtg
 240
 cagcatggaa gagttcaaag ttcccatatt gctcatcttc tcacaatctt ctgtttccat
 300
 ctcttcaaaa ttttgcagag aatacaatga tggccttggc ttgttttctc catccaccga
 360
 agccccctgtg atattggaca atgccaaaga atccatcgaa tcccgaacac tttgctctgg
 420
 tttcaggtct gacagacact ccaggggaatc ttcataccac tgtgtttcat catgattata
 480
 ccctgaagcc ccatgggtcca gttccaattc ctgaagcctt ctactgcttg cagggcctgg
 540
 gtggctgcca taagcagaat cgcccagtcc atcttgtgac
 580

<210> 3428

<211> 132

<212> PRT

<213> Homo sapiens

<400> 3428

Met	Asp	Ser	Leu	Ala	Leu	Ser	Asn	Ile	Thr	Gly	Ala	Ser	Val	Asp	Gly
1				5					10					15	
Glu	Asn	Lys	Pro	Arg	Pro	Ser	Leu	Tyr	Ser	Leu	Gln	Asn	Phe	Glu	Glu
			20					25					30		
Met	Glu	Thr	Glu	Asp	Cys	Glu	Lys	Met	Ser	Asn	Met	Gly	Thr	Leu	Asn
		35					40					45			
Ser	Ser	Met	Leu	His	Arg	Ser	Ala	Glu	Ser	Leu	Lys	Ser	Leu	Ser	Ser
	50					55					60				
Glu	Leu	Cys	Pro	Glu	Lys	Ile	Leu	Pro	Glu	Glu	Lys	Pro	Val	His	Leu
65					70					75				80	
Pro	Val	Leu	Arg	Arg	Ser	Lys	Ser	Gln	Ser	Arg	Pro	Gln	Gln	Val	Lys
			85					90					95		
Phe	Ser	Asp	Asp	Val	Ile	Asp	Asn	Gly	Asn	Tyr	Asp	Ile	Glu	Ile	Arg
		100					105					110			
Gln	Pro	Pro	Met	Ser	Glu	Arg	Thr	Arg	Arg	Arg	Val	Tyr	Asn	Phe	Glu
		115				120					125				
Glu	Arg	Gly	Ser												
	130														

<210> 3429

<211> 634

<212> DNA

<213> Homo sapiens

<400> 3429

cccggggggc tgggagggga ggcacagtct ggtctgcact gaggtaggcc gccgtggaga
 60
 aggggaagggg gccggcagct ggatgtggca ggatgatttc tctgagagt agccctcgcg
 120
 gtcagettcc ttttcatact ttcccggcgt tctctccacg agcaggtgca ccagggacct
 180

gtccctctgt cctacacggt caccacagtg acgacccaag gcttcccctt gcctacaggc
 240
 cagcacatcc ctggctgcag tgcccagcag ctcccagcat gctccgtgat gttcagtggg
 300
 cagcattacc cctctgctg cctcccgcgc ccgcttatcc aggcgtgcac catgcagcag
 360
 ctgcctgtgc cctatcaggc ctacccccac ctcatctcca gtgaccacta catcctgcac
 420
 cccccaccac cgggcacaca cccagcagct ccagggtctg tataagaaac cctgtggaag
 480
 gcccatccct gtcctaggcc acccaggcag gacactccac tgtaaggcc cacagcctca
 540
 actcctgggc ctctgccaag ctgtgaggca ggtacagggg tactggaagg ttctgaacc
 600
 ttgaaacact ctattaccaa atgtgaacac gcgt
 634

<210> 3430

<211> 122

<212> PRT

<213> Homo sapiens

<400> 3430

Phe	Leu	Leu	Arg	Val	Ala	Leu	Ala	Val	Ser	Phe	Leu	Phe	Ile	Leu	Ser
1				5					10					15	
Arg	Arg	Ser	Leu	His	Glu	Gln	Val	His	Gln	Gly	Pro	Val	Pro	Leu	Ser
			20					25					30		
Tyr	Thr	Val	Thr	Thr	Val	Thr	Thr	Gln	Gly	Phe	Pro	Leu	Pro	Thr	Gly
		35				40						45			
Gln	His	Ile	Pro	Gly	Cys	Ser	Ala	Gln	Gln	Leu	Pro	Ala	Cys	Ser	Val
		50				55					60				
Met	Phe	Ser	Gly	Gln	His	Tyr	Pro	Leu	Cys	Cys	Leu	Pro	Pro	Pro	Leu
65					70					75					80
Ile	Gln	Ala	Cys	Thr	Met	Gln	Gln	Leu	Pro	Val	Pro	Tyr	Gln	Ala	Tyr
				85				90					95		
Pro	His	Leu	Ile	Ser	Ser	Asp	His	Tyr	Ile	Leu	His	Pro	Pro	Pro	Pro
			100					105					110		
Gly	Thr	His	Pro	Ala	Ala	Pro	Gly	Ser	Val						
			115				120								

<210> 3431

<211> 1396

<212> DNA

<213> Homo sapiens

<400> 3431

tgcagctcgg cctctgctgc ctgccggtgc tcttcgtggc tctgggcatg gcatcggacc
 60
 ccatcttcac gctggcgccc ccgctgcatt gccactacgg ggccttcccc cctaatagcct
 120
 ctgcgtggga gcagcgtccc aatgccagcg cgtcacgtcg ccagcgtgc cctagcacgc
 180
 agcgccgcca gccgtgtcgc caacagtacc aaatcgtcgt gcagcggctt cgccccgccg
 240

gacttcaacc attgcctcaa ggattgggac tataatggcc ttcctgtgct caccaccaac
 300
 gccatcggcc agtgggatct ggtgtgtgac ctgggctggc aggtgatcct ggagcagatc
 360
 ctcttcatct tgggctttgc ctccggetac ctgttcctgg gttaccccg c agacagattt
 420
 ggccgtcgcg ggattgtgct gctgacctg gggctgggtg gccctgtgg agtaggaggg
 480
 gctgctgcag gtcctccac aggcgtcatg gccctccgat tcctcttggg ctttctgctt
 540
 gccgggtgtg acctgggtgt ctacctgatg cgcttgaggc tgtgcgacc aaccagagg
 600
 cttcgggtgg ccctggcagg ggagttggtg ggggtgggag ggcacttct gttcctgggc
 660
 ctggcccttg tctctaagga ttggcgattc ctacagcgaa tgatcaccgc tcctgcatc
 720
 ctcttctgt tttatggctg gcctgggttg ttcctggagt ccgcacgggtg gctgatagtg
 780
 aagcggcaga ttgaggaggc tcagtctgtg ctgaggatcc tggctgagcg aaaccggccc
 840
 catgggcaga tgctggggga ggaggccag gaggccctgc aggacctgga gaatacctgc
 900
 cctctccctg caacatcctc cttttccctt gcttccctcc tcaactaccg caacatctgg
 960
 aaaaatctgc ttatcctggg cttcaccaac ttcattgccc atgccattcg ccactgctac
 1020
 cagcctgtgg gaggaggagg gagcccatcg gacttctacc tgtgctctct gctggccagc
 1080
 ggcaccgcag ccctggcctg tgtcttctcg ggggtcaccg tggaccgatt tggccgccgg
 1140
 ggcatecttc ttctctccat gacccttacc ggcattgctt ccctggctct gctgggcctg
 1200
 tgggattgtg agcatcctat cttccccaca gtgtgggctc aacaaggga ccccaacaga
 1260
 gatctgaacg aggtgccat caccatttc tctgtccttg ggctcttctc ctcccaagct
 1320
 gccgccatcc tcagcaccct ccttgctgct gaggtcatcc ccaccactgt ccggggccgt
 1380
 ggctggggc tgatca
 1396

<210> 3432

<211> 296

<212> PRT

<213> Homo sapiens

<400> 3432

Met Ala Leu Arg Phe Leu Leu Gly Phe Leu Leu Ala Gly Val Asp Leu
 1 5 10 15
 Gly Val Tyr Leu Met Arg Leu Glu Leu Cys Asp Pro Thr Gln Arg Leu
 20 25 30
 Arg Val Ala Leu Ala Gly Glu Leu Val Gly Val Gly Gly His Phe Leu
 35 40 45
 Phe Leu Gly Leu Ala Leu Val Ser Lys Asp Trp Arg Phe Leu Gln Arg

50	55	60
Met Ile Thr Ala Pro Cys Ile Leu Phe Leu Phe Tyr Gly Trp Pro Gly		
65	70	75
Leu Phe Leu Glu Ser Ala Arg Trp Leu Ile Val Lys Arg Gln Ile Glu		80
	85	90
Glu Ala Gln Ser Val Leu Arg Ile Leu Ala Glu Arg Asn Arg Pro His		95
	100	105
Gly Gln Met Leu Gly Glu Glu Ala Gln Glu Ala Leu Gln Asp Leu Glu		110
	115	120
Asn Thr Cys Pro Leu Pro Ala Thr Ser Ser Phe Ser Phe Ala Ser Leu		125
	130	135
Leu Asn Tyr Arg Asn Ile Trp Lys Asn Leu Leu Ile Leu Gly Phe Thr		140
145	150	155
Asn Phe Ile Ala His Ala Ile Arg His Cys Tyr Gln Pro Val Gly Gly		160
	165	170
Gly Gly Ser Pro Ser Asp Phe Tyr Leu Cys Ser Leu Leu Ala Ser Gly		175
	180	185
Thr Ala Ala Leu Ala Cys Val Phe Leu Gly Val Thr Val Asp Arg Phe		190
	195	200
Gly Arg Arg Gly Ile Leu Leu Leu Ser Met Thr Leu Thr Gly Ile Ala		205
	210	215
Ser Leu Val Leu Leu Gly Leu Trp Asp Cys Glu His Pro Ile Phe Pro		220
225	230	235
Thr Val Trp Ala Gln Gln Gly Asn Pro Asn Arg Asp Leu Asn Glu Ala		240
	245	250
Ala Ile Thr Thr Phe Ser Val Leu Gly Leu Phe Ser Ser Gln Ala Ala		255
	260	265
Ala Ile Leu Ser Thr Leu Leu Ala Ala Glu Val Ile Pro Thr Thr Val		270
	275	280
Arg Gly Arg Gly Leu Gly Leu Ile		285
	290	295

<210> 3433

<211> 1257

<212> DNA

<213> Homo sapiens

<400> 3433

tgagctacac gcgagcngg gccgaacag cggctcctcc cttcggccca gaggcccagc
 60
 tcagtgcgcc cttcaccttc acctcgacct ctgccgggag ggagacagcg tccgcagaga
 120
 ccgagccact cccgttccca caccaggctcg aacttgaaaa gggacgtcgc ccacctgtac
 180
 cgaggagtcg gctcgcgcta catcatgggg tcaggagaat ccttcattgca gctgcagcag
 240
 cgtctcctga gagagaagga ggccaagatc aggaaggcct tggacaggct tcgcaagaag
 300
 aggcacctgc tccgccggca gcggacgagg cgggagttcc ccgtgatctc cgtggtgggg
 360
 tacaccaact gcggtgagca cgcgccaggg ggaggggcct tccgcggtct ccgtgtcacc
 420
 ggtgaggact cgcccggggg agggcagggg gtccctgtcg tctcagtggt gccgtacgac
 480

agctgcggtg agcacgtgcc caggagaggg gggtcccatg gtcgccgtgt ggggtacacc
 540
 agctgctgtg agagctcacc caggagacgg gtttcctgtg gtctctgtgt ggggtacacc
 600
 agccaagggtg aggatgtcat ctaccccatc ctcccatcca gagctttacc accctgtcta
 660
 taccacaacc tccctccat ctacaccatc ctctgtcta gaccatcccc actgcctat
 720
 ctataccacc accctgtcta cacaatccac ccatctacac catcacctct cctctgtcta
 780
 taccatcctc ctgtctacac cagcaccact acccatcta taccaccacc cgtctacat
 840
 aatccaccgg tgtacaccac aatgtccctc tctgtgtcac cgtcctcctg tctacactgg
 900
 caccactgcc ccagctatac caccaccccg tctacataat ccacccatct gtctacacca
 960
 tcgcctctcc tctgtctaca ccattcctct gtcaacaccg gcaccactgc cgtatctata
 1020
 tccacccatc tacaccatca cctccctgt gtctacacca tcctcccatc cacaccagca
 1080
 ccaccacccc acctacacca tccaccatc tacgccattg ccaaattctac acagacgacc
 1140
 tcactcccat ccacgccttc acacgcacac ccgtccacac caccatctcc cccgtgtccg
 1200
 cagggcggcc ccgtccatc ggcccagaaa cagcgacggt ggctttgtcc cagcgt
 1257

<210> 3434

<211> 311

<212> PRT

<213> Homo sapiens

<400> 3434

Ala	Thr	Arg	Gly	Ala	Gly	Pro	Gln	Gln	Arg	Leu	Leu	Pro	Ser	Ala	Gln
1			5						10					15	
Arg	Pro	Ser	Ser	Val	Pro	Pro	Ser	Pro	Ser	Pro	Arg	Pro	Leu	Pro	Gly
		20						25					30		
Gly	Arg	Gln	Arg	Pro	Gln	Arg	Pro	Ser	His	Ser	Arg	Ser	His	Thr	Arg
		35					40					45			
Ser	Asn	Leu	Lys	Arg	Asp	Val	Ala	His	Leu	Tyr	Arg	Gly	Val	Gly	Ser
	50					55					60				
Arg	Tyr	Ile	Met	Gly	Ser	Gly	Glu	Ser	Phe	Met	Gln	Leu	Gln	Gln	Arg
65					70					75					80
Leu	Leu	Arg	Glu	Lys	Glu	Ala	Lys	Ile	Arg	Lys	Ala	Leu	Asp	Arg	Leu
				85					90					95	
Arg	Lys	Lys	Arg	His	Leu	Leu	Arg	Arg	Gln	Arg	Thr	Arg	Arg	Glu	Phe
			100						105					110	
Pro	Val	Ile	Ser	Val	Val	Gly	Tyr	Thr	Asn	Cys	Gly	Glu	His	Ala	Pro
		115					120					125			
Arg	Gly	Gly	Ala	Phe	Arg	Gly	Leu	Arg	Val	Thr	Gly	Glu	Asp	Ser	Pro
	130					135					140				
Gly	Gly	Gly	Gln	Gly	Val	Pro	Val	Val	Ser	Val	Val	Pro	Tyr	Asp	Ser
145					150					155					160
Cys	Gly	Glu	His	Val	Pro	Arg	Arg	Gly	Gly	Ser	His	Gly	Arg	Arg	Val

165								170				175			
Gly	Tyr	Thr	Ser	Cys	Cys	Glu	Ser	Ser	Pro	Arg	Arg	Arg	Val	Ser	Cys
180								185				190			
Gly	Leu	Cys	Val	Gly	Tyr	Ser	Ser	Gln	Gly	Glu	Asp	Val	Ile	Tyr	Pro
195								200				205			
Ile	Leu	Pro	Ser	Arg	Ala	Leu	Pro	Pro	Cys	Leu	Tyr	His	Asn	Leu	Pro
210								215				220			
Ser	Ile	Tyr	Thr	Ile	Leu	Leu	Ser	Arg	Pro	Ser	Pro	Leu	Pro	Tyr	Leu
225								230				235			
Tyr	His	His	Pro	Val	Tyr	Thr	Ile	His	Pro	Ser	Thr	Pro	Ser	Pro	Leu
245								250				255			
Leu	Cys	Leu	Tyr	His	Pro	Pro	Val	Tyr	Thr	Ser	Thr	Thr	Thr	Pro	Ser
260								265				270			
Ile	Pro	Pro	Pro	Arg	Leu	His	Asn	Pro	Pro	Val	Tyr	Thr	Thr	Met	Ser
275								280				285			
Pro	Ser	Ser	Ala	Pro	Ser	Ser	Cys	Leu	His	Trp	His	His	Cys	Pro	Ser
290								295				300			
Tyr	Thr	Thr	Thr	Pro	Ser	Thr									
305								310							

```
<210> 3435
<211> 1225
<212> DNA
<213> Homo sapiens
```

```

<400> 3435
nnccactcct tgtatgacca ctggggcaag gaggatgaga acctgggtag cgtgaagcag
60
tatgtggaga gcatagacgt ttcctcctac acggaggagt tcaacgtgtc ctgcctgaca
120
gacagcaatg ccgataccta ctgggagagc gatgggtccc agtgccaaca ctgggtacgg
180
cttactatga agaagggcac cattgtcaag aagctgctac tcgcagtgga taccacagat
240
gacaacttta tgccaaagcg ggtggtggtc tatgggggtg aaggggacaa cctgaagaag
300
ctgagtgcag tgagcattga cngagaccc tcatcggggn atgtctgtgt cctggaggac
360
atgaccgtcc acctcccgat catcgagatc cgcacgtggt agtgccgaga tgatgggatt
420
gatgttcgtc tccgaggggt caagatcaag tcatctagac agcggggaact agggttgaat
480
gcagacctgt tccagccaac tagtctggtg cgatatccac gcctagaagg caccgaccct
540
gaagtactgt accgcagagc tgtcctcctg cagagattca tcaagatcct cgatagtgtc
600
ctgcaccacc tggtagctgc ctgggaccac aactggggca ccttcagtga gattaagcaa
660
gtgaagcagt tctactgct gtcccgccag cggccaggcc tgggtggctca gtgcctgcgt
720
gactctgaga gcagcaagcc cagcttcatg ccacgcctat acatcaaccg ccgtcttgcc
780
atggaacacc gtgcctgccc ctctcgagac cctgcctgca agaatgcagt cttcaccag
840

```


gtatatgaag gcctcaagcc ctctgacaaa tatgaaaagc ccctggacta caggtggccc
 900
 atgcgctatg accagtgggtg ggagtgtaaa tttattgcag aaggcatcat tgaccaaggg
 960
 ggtgggtttcc gggacagcct ggcagatatg tcagaagagc tgtgccctag ctacagcgat
 1020
 acccccgtgc ccctgccctt ctttgtacgc acagccaacc agggcaatgg cactgggtgag
 1080
 gctcgggaca tgtatgtacc caaccctcc tgccgagact ttgccaagta tgaatggatc
 1140
 ggacagctga tgggggctgc ccttcgggggt aaggagttcc tggtcctggc cctgcctggt
 1200
 tttgtgtgga agcagctttc tgcag
 1225

<210> 3436

<211> 408

<212> PRT

<213> Homo sapiens

<400> 3436

Xaa	His	Ser	Leu	Tyr	Asp	His	Trp	Gly	Lys	Glu	Asp	Glu	Asn	Leu	Gly
1			5					10					15		
Ser	Val	Lys	Gln	Tyr	Val	Glu	Ser	Ile	Asp	Val	Ser	Ser	Tyr	Thr	Glu
		20						25					30		
Glu	Phe	Asn	Val	Ser	Cys	Leu	Thr	Asp	Ser	Asn	Ala	Asp	Thr	Tyr	Trp
	35						40				45				
Glu	Ser	Asp	Gly	Ser	Gln	Cys	Gln	His	Trp	Val	Arg	Leu	Thr	Met	Lys
	50				55						60				
Lys	Gly	Thr	Ile	Val	Lys	Lys	Leu	Leu	Leu	Ala	Val	Asp	Thr	Thr	Asp
65				70					75						80
Asp	Asn	Phe	Met	Pro	Lys	Arg	Val	Val	Val	Tyr	Gly	Gly	Glu	Gly	Asp
			85					90						95	
Asn	Leu	Lys	Lys	Leu	Ser	Asp	Val	Ser	Ile	Asp	Xaa	Arg	Pro	Ser	Ser
			100					105					110		
Gly	Xaa	Val	Cys	Val	Leu	Glu	Asp	Met	Thr	Val	His	Leu	Pro	Ile	Ile
	115						120					125			
Glu	Ile	Arg	Ile	Val	Glu	Cys	Arg	Asp	Asp	Gly	Ile	Asp	Val	Arg	Leu
	130					135					140				
Arg	Gly	Val	Lys	Ile	Lys	Ser	Ser	Arg	Gln	Arg	Glu	Leu	Gly	Leu	Asn
145				150						155					160
Ala	Asp	Leu	Phe	Gln	Pro	Thr	Ser	Leu	Val	Arg	Tyr	Pro	Arg	Leu	Glu
			165					170						175	
Gly	Thr	Asp	Pro	Glu	Val	Leu	Tyr	Arg	Arg	Ala	Val	Leu	Leu	Gln	Arg
		180						185					190		
Phe	Ile	Lys	Ile	Leu	Asp	Ser	Val	Leu	His	His	Leu	Val	Pro	Ala	Trp
	195						200					205			
Asp	His	Thr	Leu	Gly	Thr	Phe	Ser	Glu	Ile	Lys	Gln	Val	Lys	Gln	Phe
	210				215						220				
Leu	Leu	Leu	Ser	Arg	Gln	Arg	Pro	Gly	Leu	Val	Ala	Gln	Cys	Leu	Arg
225				230					235						240
Asp	Ser	Glu	Ser	Ser	Lys	Pro	Ser	Phe	Met	Pro	Arg	Leu	Tyr	Ile	Asn
			245					250						255	
Arg	Arg	Leu	Ala	Met	Glu	His	Arg	Ala	Cys	Pro	Ser	Arg	Asp	Pro	Ala

ccancgtctc caggtcctga cctggccttc ctgacttcct gtcctgacaa gaacaaagtc
 900
 catttcaacc cgactggctc accttctgcc ccgtcaacct gatgaagccc ctcttccccg
 960
 gcatgggctt catctcgtaa ctgccccctca aaccgggat ctccccctcc cccggccagc
 1020
 cccaggccac cacctcggaa ggatccggaa gcctccaagg cctccccact gccattcgag
 1080
 ccatggcagc gcacccacc atcagaagag cctgtgcttt tccagagctc cctgatggtc
 1140
 tgagggtccc accctgccc cactttacca tagagaccag tgccttggtg gcagggtccct
 1200
 cccaggtcc cctgagatgg ggtatggagg ggcccttccc tctcggcctt cgagcacttt
 1260
 ctttcaactta ctgtgtcaaa gccctgggtc ctctttttga tgggcaccgg cccctctgaa
 1320
 cgtgatggga cctgccttct ccactagtag ctgggcagct cacaattcac acctgtgtac
 1380
 ctgccacatc cctcaattgg tggaaaacac ccagaaggtc ttgagtcccc caccctggg
 1440
 tgtcagtcca aatgactgta taggaggccc ttatttttgt cacagagcaa gctggccatg
 1500
 aacgaaggag agaagacgcc acagatttcc ttccctctcc tccaggagac cataagatag
 1560
 atccccatc ctctcagccc tattcccatg cctccctctc attggaggag ctgaccaaag
 1620
 cagccctaac gggccataac acttgaccaa ttcagctgct ggcagaggga ggaaacaagt
 1680
 gttttcccaa gtggcatttt catctcgctt tcacctgac taaagattgt cttaagtagc
 1740
 agcccagccc gccagcccc aggtgggtag tggggaggag agctggcatt cctccaggtg
 1800
 gcaaatggcg actctatact ctccgcccgc cccagggtg gatggattag aaaaatgcct
 1860
 atttttcttg tatcgatgta gagactctat tttctcccaa agacactatt tttgcagctg
 1920
 tttgaagttt gtatatatttc cgtactgcag agcttacaca aaattgaaga atgttaatgt
 1980
 tcgagttttc ttatcttggtg tttagagggt gttttttgca gatcttggtg ttaatagacc
 2040
 aaataaataa ataaatatc ccagcaaaaa aaaaaaaaaa a
 2081

<210> 3438

<211> 105

<212> PRT

<213> Homo sapiens

<400> 3438

Ala	Cys	Gln	Phe	Leu	Cys	Thr	Gln	Ala	Leu	Ser	Ile	Leu	Gly	Gln	His
1				5				10					15		
Arg	Pro	Pro	Lys	Arg	Asp	Phe	Gln	Val	Glu	Ala	Thr	Thr	Ala	Glu	Asp
			20				25						30		
Glu	Ala	Glu	Pro	Gln	Trp	Glu	Arg	Glu	Gly	Ala	Arg	Phe	Thr	Thr	Pro

tcgacccccca ccctagggaa tgcagagcct ctccgcatgt gtgcgcgtgg ccgtgtctgt
 1200
 gtattttctac gtgtgtcgct cttcagaagc aacctagttc ctgggggcagc tggactttgc
 1260
 atgttagtgt gagccccag cccctgccc gccgcccct cccagggcc ctgcctcctc
 1320
 cccaccccct cgtcagccag cgttgctgtt ccttgcagag aaaaggattg tgggaaactc
 1380
 caggactctt cccaccgct cccagcgcct gcctgctggg gctgcctgca tgcctcccct
 1440
 gcacctgggg gtaccgcgcat ccacttcctt tccccctttt aacaaaagag aagaacgaat
 1500
 tccaaaccaa aaaaaaaaaa
 1519

<210> 3440

<211> 287

<212> PRT

<213> Homo sapiens

<400> 3440

Cys	Ala	Pro	Pro	Pro	Ile	Pro	Leu	Leu	His	Pro	Pro	Thr	Ser	Leu	Thr
1				5					10					15	
Leu	Ser	Pro	Cys	Ser	Pro	Val	Ser	Arg	Pro	Pro	Arg	Ala	Ser	Thr	Ala
			20					25					30		
Val	Ala	Ala	Ala	Ala	Arg	Trp	Pro	Arg	Gln	Pro	Arg	His	Pro	Arg	His
			35				40					45			
Thr	Ser	Pro	Met	Pro	Pro	Pro	Ala	Ala	Leu	Arg	Pro	Pro	Ala	Gly	Pro
			50			55					60				
Arg	Arg	Pro	Arg	Xaa	Pro	Gly	Gly	Pro	Gln	His	His	Gln	Pro	Gln	Pro
65					70				75					80	
Pro	Leu	Trp	Thr	Pro	Thr	Pro	Pro	Ser	Pro	Ala	Ser	Asp	Trp	Pro	Pro
				85				90					95		
Leu	Pro	Pro	Asn	Arg	Pro	Pro	Gln	Asn	Pro	Gly	Pro	Thr	Leu	Pro	Trp
			100				105					110			
Arg	Gln	Arg	Asp	Lys	Gly	Gly	Pro	Ser	Pro	Leu	Pro	Glu	Ala	Arg	Thr
			115				120					125			
Pro	Trp	Gly	Gly	Gly	Glu	Asp	Val	Ser	Ala	Gly	Pro	Leu	Xaa	Thr	Pro
			130			135					140				
Phe	Leu	Ser	Ala	Pro	Leu	Val	Pro	Arg	Ser	Pro	Gly	Gly	Glu	Ser	Ala
145					150					155				160	
Asp	Ser	Ser	Gln	Ala	Gly	Thr	Arg	Leu	Val	Pro	Glu	His	Ala	Ala	Ala
			165					170						175	
His	Thr	Gln	Gly	His	Gly	Pro	Ser	Gly	Pro	Gly	Thr	Trp	Ser	Gly	Ser
			180					185				190			
Glu	Arg	Pro	Gly	Cys	Leu	Ala	Asp	Arg	Thr	Ser	Glu	Thr	Thr	Gln	Pro
			195				200					205			
Ser	Phe	Glu	Asp	Ala	Pro	Ala	Gln	Pro	Ser	Pro	Gly	Val	Pro	Trp	Arg
			210			215					220				
Thr	Thr	Leu	Ala	Glu	Thr	Leu	Leu	Ile	Pro	Gly	Leu	Glu	Leu	Leu	Gly
225					230					235					240
Gly	Arg	Gln	Ala	Ser	Thr	Pro	Thr	Leu	Gly	Asn	Ala	Glu	Pro	Leu	Arg
			245					250						255	
Met	Cys	Ala	Arg	Gly	Arg	Val	Cys	Val	Phe	Leu	Arg	Val	Ser	Leu	Phe

	260		265		270								
Arg	Ser	Asn	Leu	Val	Pro	Gly	Ala	Gly	Leu	Cys	Met	Leu	Val
	275		280		285								

<210> 3441
 <211> 2074
 <212> DNA
 <213> Homo sapiens

<400> 3441
 ntcatgaagc acctgcccaa ggttccggag aaaaaactga agctgggttat ggctgacaag
 60
 gagctgtatc gagcctgcgc cgtggagggtg aagcggcaga tctggcaaga caaccaggcc
 120
 ctcttcgggg acgaggtttc cccactcctg aagcagtaca tcctggagaa ggagagcgct
 180
 ctcttcagta cagagctctc tgtcctgcac aactttttca gtccttcccc caagaccagg
 240
 cgccagggcg aggtggtgca gcggtgacg cggatgggtgg ggaagaacgt gaagctgtac
 300
 gacatggtgc tgcagtttct gcgcacgctc ttcttgcgca cgcggaatgt gcactactgc
 360
 acgctgcggg ctgagctgct catgtccctg cacgacctgg acgtgggtga aatctgcacc
 420
 gtggacccgt gccacaagtt cacctggtgc ctggacgcct gcacccgaga gcggttcgtg
 480
 gacagcaaga gggcgcgga gctgcagggg tttctcgatg acgtcaagaa gggccaggag
 540
 caggtgctgg gggacctgtc catgatcctg tgtgacctt tcgccatcaa cacgtggca
 600
 ctgagcacag tcaggcacct gcaggagctg gtcggccagg agacactgcc cagggacagc
 660
 cccgacctcc tgctgctgct ccggtgctg gcgctgggccc agggagcctg ggacatgatc
 720
 gacagccagg tcttcaagga gccaagatg gaggtagagc tcatcaccag gttcctcccc
 780
 atgctcatgt ctttctggt ggatgactac actttcaatg tggatcagaa acttccggct
 840
 gaggagaaag cccagttctc atatccaaac acacttcccg aaagcttcac taagtttctg
 900
 caggagcagc gcatggcctg cgagggtggg ctgtactacg tcctgcacat caccaagcag
 960
 aggaacaaga acgcgctcct ccgcctgctg ccggggctgg tggagacctt tggcgacttg
 1020
 gcctttggcg acatcttctt ccacctgctc acgggcaacc ttgcgctgct ggccgacgaa
 1080
 tttgcccttg aggacttctg cagcagcctc ttcgatggct tcttctctac cgcctctcca
 1140
 aggaaggaga acgtgcaccg gcacgcgctg cggctcctca ttcacctgca ccccagggtg
 1200
 gccccatcta agctggaggc gttgcagaag gccctggagc ctacaggcca gagcggagag
 1260
 gcagtgaagg agctttactc ccagctcggc gagaagctgg aacagctgga tcaccggaag
 1320

cccagcccgg cacaggctgc ggagacgccg gccctggagc tgcccctccc cagcgtgccc
 1380
 gccctgccc cgtcttgagg gccctccaga cctgctcggg tgctggggcc atgccgagtc
 1440
 gcggccctgc tcagccggaa gaggctcccg gacctggatg tacagggcag tctctcttcc
 1500
 cggggctatg gctgggcctg tctgcccgc atggccccct gcttctctgt ccttgaggct
 1560
 ggctcccga ccttgcccac catccatgca gtggctccca gggcagagcc tctccttgta
 1620
 ctttggcagc catagaaagc gtgctcattt tctgttttcc tgtgttagga aaaaaccacc
 1680
 tgttttccaa ggggagaggg cggggcctga ggggtggggc ggggcctctt cattggccca
 1740
 gcttggcgaa agcagggcac actgcttact gccttggggg tgtggagatg gaccctgac
 1800
 ctcgtggagg ccgtgtgggg gcagcagcct ggctgtgcc atggtgggtg tctggggcc
 1860
 tgtgcggagg gagccacctc accctgcagc ccagtttgca ggtgtggcct tgtttctct
 1920
 tgcccagcag tgctgccttc agcgggcctg acggggccag ctggacacac ggtgagattt
 1980
 tctcgtatgt aaataaaagg caatttgga aacgtggaaa aaaaaaaaaa aaaaaaaaaa
 2040
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 2074

<210> 3442

<211> 374

<212> PRT

<213> Homo sapiens

<400> 3442

Met	Val	Gly	Lys	Asn	Val	Lys	Leu	Tyr	Asp	Met	Val	Leu	Gln	Phe	Leu
1				5					10					15	
Arg	Thr	Leu	Phe	Leu	Arg	Thr	Arg	Asn	Val	His	Tyr	Cys	Thr	Leu	Arg
			20					25					30		
Ala	Glu	Leu	Leu	Met	Ser	Leu	His	Asp	Leu	Asp	Val	Gly	Glu	Ile	Cys
			35				40						45		
Thr	Val	Asp	Pro	Cys	His	Lys	Phe	Thr	Trp	Cys	Leu	Asp	Ala	Cys	Ile
			50				55					60			
Arg	Glu	Arg	Phe	Val	Asp	Ser	Lys	Arg	Ala	Arg	Glu	Leu	Gln	Gly	Phe
65					70					75					80
Leu	Asp	Asp	Val	Lys	Lys	Gly	Gln	Glu	Gln	Val	Leu	Gly	Asp	Leu	Ser
				85						90					95
Met	Ile	Leu	Cys	Asp	Pro	Phe	Ala	Ile	Asn	Thr	Leu	Ala	Leu	Ser	Thr
			100						105					110	
Val	Arg	His	Leu	Gln	Glu	Leu	Val	Gly	Gln	Glu	Thr	Leu	Pro	Arg	Asp
			115					120					125		
Ser	Pro	Asp	Leu	Leu	Leu	Leu	Leu	Arg	Leu	Leu	Ala	Leu	Gly	Gln	Gly
			130				135					140			
Ala	Trp	Asp	Met	Ile	Asp	Ser	Gln	Val	Phe	Lys	Glu	Pro	Lys	Met	Glu
145					150					155					160
Val	Glu	Leu	Ile	Thr	Arg	Phe	Leu	Pro	Met	Leu	Met	Ser	Phe	Leu	Val

165							170							175							
Asp	Asp	Tyr	Thr	Phe	Asn	Val	Asp	Gln	Lys	Leu	Pro	Ala	Glu	Glu	Lys						
180							185							190							
Ala	Pro	Val	Ser	Tyr	Pro	Asn	Thr	Leu	Pro	Glu	Ser	Phe	Thr	Lys	Phe						
195							200							205							
Leu	Gln	Glu	Gln	Arg	Met	Ala	Cys	Glu	Val	Gly	Leu	Tyr	Tyr	Val	Leu						
210							215							220							
His	Ile	Thr	Lys	Gln	Arg	Asn	Lys	Asn	Ala	Leu	Leu	Arg	Leu	Leu	Pro						
225	230							235							240						
Gly	Leu	Val	Glu	Thr	Phe	Gly	Asp	Leu	Ala	Phe	Gly	Asp	Ile	Phe	Leu						
245							250							255							
His	Leu	Leu	Thr	Gly	Asn	Leu	Ala	Leu	Leu	Ala	Asp	Glu	Phe	Ala	Leu						
260							265							270							
Glu	Asp	Phe	Cys	Ser	Ser	Leu	Phe	Asp	Gly	Phe	Phe	Leu	Thr	Ala	Ser						
275							280							285							
Pro	Arg	Lys	Glu	Asn	Val	His	Arg	His	Ala	Leu	Arg	Leu	Leu	Ile	His						
290							295							300							
Leu	His	Pro	Arg	Val	Ala	Pro	Ser	Lys	Leu	Glu	Ala	Leu	Gln	Lys	Ala						
305	310							315							320						
Leu	Glu	Pro	Thr	Gly	Gln	Ser	Gly	Glu	Ala	Val	Lys	Glu	Leu	Tyr	Ser						
325							330							335							
Gln	Leu	Gly	Glu	Lys	Leu	Glu	Gln	Leu	Asp	His	Arg	Lys	Pro	Ser	Pro						
340							345							350							
Ala	Gln	Ala	Ala	Glu	Thr	Pro	Ala	Leu	Glu	Leu	Pro	Leu	Pro	Ser	Val						
355							360							365							
Pro	Ala	Pro	Ala	Pro	Leu																
370																					

<210> 3443

<211> 2070

<212> DNA

<213> Homo sapiens

<400> 3443

ctggccgtaa atgccgagga ggacgcctgg ttacggggcac aggtcatctc aacagaagag
60

aacaaaataa aggtatgcta tgttgactat ggtttttagtg aaaatgttga aaaaagcaaa
120

gcatacaaat taaaccgaa gttttgttca ctctcatttc aagctacaaa atgtaagctt
180

gcaggcttgg aagtcctaag cgatgaccct gatctagtga aggtgggtga atctttaact
240

tgtgtgaaaga tctttgcagt ggaaatactt gacaaaagctg acattccact tgttgttctg
300

tacgatacct caggagaaga tgatatcaat atcaatgcc a cctgcttgaa ggctatatgt
360

gacaagtcac tagagggttca cctgcagggtt gacgccatgt acacaaatgt caaaataact
420

aatatttgct ctgatgggac actctactgc caggtgcctt gtaagggctc gaacaagctc
480

540 agtgaccttc tacgtaagat agaggactac ttccattgca agcacatgac ctctgagtgc

tttgtttcat tacccttctg tgggaaaatc tgcctcttcc attgcaaagg aaaatgggta
600

cgagtagaga tcacaaatgt tcacagcagc cgggctcttg atgttcagtt cctggactct
660
ggcactgtga catctgtaaa agtgtcagag ctcagggaaa ttccacctcg gtttctacaa
720
gaaatgattg caataccacc tcaggccatt aagtgtctgt tagcagatct tccacaatct
780
attggcatgt ggacaccaga tgcagtgtg tgggtaagag attctgtttt gaattgctcg
840
gactgtagca ttaaggttac aaaagtggat gaaaccagag ggatcgacac tggtttattta
900
tttaccctta agaacttccc tgaccctcat cgcagtatta atcgccagat taaaaatgca
960
gacttgtgga agcatcagaa ggatgtgttt ttgagtgtcc tatccagtgg agctgactct
1020
cccaacagca aaaatggcaa catgcccatg tcgggcaaca ctggagagaa ttccagaaag
1080
aacctcacag atgtcatcaa aaagtccatg gtggaccata cgagcgcttt ctccacagag
1140
gaactgccac ctctgtcca cttatcaaag ccaggggaac acatggatgt gtatgtgcct
1200
gtggcctgtc acccaggcta cttcgtcatc cagccttggc aggagataca taagttggaa
1260
gttctgatgg aagagatgat tctatattac agcgtgtctg aagagcgcca catagcagtg
1320
gagaaagacc aagtgtatgc tgcaaaagtg gaaaataagt ggcacagggt gcttttaaaa
1380
ggaatcctga ccaatggact ggtatctgtg tatgagctgg attatggcaa acacgaatta
1440
gtcaacataa gaaaagtaca gcccctagtg gacatgttcc gaaagctgcc cttccaagca
1500
gtcacagctc aacttgcagg agtgaagtgc aaccagtggc ctgaggaggc ttctatgggtg
1560
tttcgaaatc atgtggagaa gaaacctctg gtggcactgg tgcagacagt cattgaaaat
1620
gctaaccctt gggaccggaa agtagtggtc tacttagtgg acacatcggt gccagacacc
1680
gatacctgga ttcattgattt tatgtcagag tatctgatag agctttcaaa agttaattaa
1740
tgactgcctc tgaaaccttg acaactaatt cagatttttt agcaataaca aaatgtagta
1800
ggcttaaaaa aaatcttaac tctgtctacat ggctctgact gctgtggggg attgaaaaga
1860
atatgcttat gtttgatgaa agatatttaa caagttttgt tttaacagag ttgacttttc
1920
aaagaaaatt gtacttgaat tattactata atattagaat aaaaatgttt atcaatataa
1980
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2040
aaaaaaaaaa aaaaaaaaaa aaaaaagggg
2070

<210> 3444

<211> 579

<212> PRT

<213> Homo sapiens

<400> 3444

```

Leu Ala Val Asn Ala Glu Glu Asp Ala Trp Leu Arg Ala Gln Val Ile
 1           5           10           15
Ser Thr Glu Glu Asn Lys Ile Lys Val Cys Tyr Val Asp Tyr Gly Phe
      20           25           30
Ser Glu Asn Val Glu Lys Ser Lys Ala Tyr Lys Leu Asn Pro Lys Phe
      35           40           45
Cys Ser Leu Ser Phe Gln Ala Thr Lys Cys Lys Leu Ala Gly Leu Glu
      50           55           60
Val Leu Ser Asp Asp Pro Asp Leu Val Lys Val Val Glu Ser Leu Thr
      65           70           75           80
Cys Gly Lys Ile Phe Ala Val Glu Ile Leu Asp Lys Ala Asp Ile Pro
      85           90           95
Leu Val Val Leu Tyr Asp Thr Ser Gly Glu Asp Asp Ile Asn Ile Asn
      100          105          110
Ala Thr Cys Leu Lys Ala Ile Cys Asp Lys Ser Leu Glu Val His Leu
      115          120          125
Gln Val Asp Ala Met Tyr Thr Asn Val Lys Ile Thr Asn Ile Cys Ser
      130          135          140
Asp Gly Thr Leu Tyr Cys Gln Val Pro Cys Lys Gly Leu Asn Lys Leu
      145          150          155          160
Ser Asp Leu Leu Arg Lys Ile Glu Asp Tyr Phe His Cys Lys His Met
      165          170          175
Thr Ser Glu Cys Phe Val Ser Leu Pro Phe Cys Gly Lys Ile Cys Leu
      180          185          190
Phe His Cys Lys Gly Lys Trp Leu Arg Val Glu Ile Thr Asn Val His
      195          200          205
Ser Ser Arg Ala Leu Asp Val Gln Phe Leu Asp Ser Gly Thr Val Thr
      210          215          220
Ser Val Lys Val Ser Glu Leu Arg Glu Ile Pro Pro Arg Phe Leu Gln
      225          230          235          240
Glu Met Ile Ala Ile Pro Pro Gln Ala Ile Lys Cys Cys Leu Ala Asp
      245          250          255
Leu Pro Gln Ser Ile Gly Met Trp Thr Pro Asp Ala Val Leu Trp Leu
      260          265          270
Arg Asp Ser Val Leu Asn Cys Ser Asp Cys Ser Ile Lys Val Thr Lys
      275          280          285
Val Asp Glu Thr Arg Gly Ile Ala His Val Tyr Leu Phe Thr Pro Lys
      290          295          300
Asn Phe Pro Asp Pro His Arg Ser Ile Asn Arg Gln Ile Thr Asn Ala
      305          310          315          320
Asp Leu Trp Lys His Gln Lys Asp Val Phe Leu Ser Ala Ile Ser Ser
      325          330          335
Gly Ala Asp Ser Pro Asn Ser Lys Asn Gly Asn Met Pro Met Ser Gly
      340          345          350
Asn Thr Gly Glu Asn Phe Arg Lys Asn Leu Thr Asp Val Ile Lys Lys
      355          360          365
Ser Met Val Asp His Thr Ser Ala Phe Ser Thr Glu Glu Leu Pro Pro
      370          375          380
Pro Val His Leu Ser Lys Pro Gly Glu His Met Asp Val Tyr Val Pro
      385          390          395          400
Val Ala Cys His Pro Gly Tyr Phe Val Ile Gln Pro Trp Gln Glu Ile

```

405 410 415
 His Lys Leu Glu Val Leu Met Glu Glu Met Ile Leu Tyr Tyr Ser Val
 420 425 430
 Ser Glu Glu Arg His Ile Ala Val Glu Lys Asp Gln Val Tyr Ala Ala
 435 440 445
 Lys Val Glu Asn Lys Trp His Arg Val Leu Leu Lys Gly Ile Leu Thr
 450 455 460
 Asn Gly Leu Val Ser Val Tyr Glu Leu Asp Tyr Gly Lys His Glu Leu
 465 470 475 480
 Val Asn Ile Arg Lys Val Gln Pro Leu Val Asp Met Phe Arg Lys Leu
 485 490 495
 Pro Phe Gln Ala Val Thr Ala Gln Leu Ala Gly Val Lys Cys Asn Gln
 500 505 510
 Trp Ser Glu Glu Ala Ser Met Val Phe Arg Asn His Val Glu Lys Lys
 515 520 525
 Pro Leu Val Ala Leu Val Gln Thr Val Ile Glu Asn Ala Asn Pro Trp
 530 535 540
 Asp Arg Lys Val Val Val Tyr Leu Val Asp Thr Ser Leu Pro Asp Thr
 545 550 555 560
 Asp Thr Trp Ile His Asp Phe Met Ser Glu Tyr Leu Ile Glu Leu Ser
 565 570 575
 Lys Val Asn

<210> 3445

<211> 2086

<212> DNA

<213> Homo sapiens

<400> 3445

nnacgcgtgg cggcagaggg tatccaaggg cggacctggc ggcagggcgc tgacccgacc
 60
 tggcagtgg ctggccgggg ccttggtga gaggccttaa ccccgccggg cggcgcgcg
 120
 cctgcatgc agttggggcg cgggccccgt tggagcctac tcggggcgac tgcgatggac
 180
 gccttagaag gagagagctt tgcgctgtct ttctcctccg cctctgatgc agaatttgat
 240
 gctgtggttg gatatttaga ggacattatc atggatgacg agttccagtt attacagaga
 300
 aatttcattg acaagtacta cctggagttt gaagacacag aagagaataa actcatctac
 360
 acacctatct ttaatgaata catttccttg gtagaaaaat acattgaaga acagctgctg
 420
 cagcggattc ctgagttcaa catggcagcc ttcaccacaa cattacacca tctgttcctg
 480
 ttgaggcacc ataaggatga agtggctggg gacatattcg acatgctgct caccttcaca
 540
 gattttctgg ctttttaaaga aatgtttttg gactacagag cagaaaaaga aggccgagga
 600
 ctggacttaa gcagtggctt agtgggtgact tcattgtgca aatcatcttc tctgccagct
 660
 tcccagaaca atctgcggca ctaggtccta cctccagcca atgaatggga tcattctgga
 720

tgtcaccagc ccaataggct cagctcatga tgacagaaca catcttggaa agactgactc
780
tgttatgtaa ctcttcattt atgttaagta ttaataggtc aaaaccaaaa tgacctaac
840
ctcctggacc tatttatact gaaacacctt cttgtattca ttaaccatag tactcctccc
900
cacctcaagt agacacctct ctcaggagct tctgagtcag acgcctctgg agcgagccct
960
atgtcaggca ctccacctgg gggggccctc cccagcatac ctgctggtgt gtaagtgtgg
1020
actaaccgcg cgccaccacc ctctgttcca gcaggctctg catgaatctt tgtgcacttg
1080
cacctctttt tcacatgggc cacagtttca gtacttcagc ctcagtgggg ttctgtatgt
1140
ttatctaggg tgttactcaa gcccagtttg agattttgga gtctcctgtg atcacatctt
1200
gtctcggctg taggaatcaa cagaaggaga cgtcctctac ataaaagctc catgtgaaaa
1260
gctactccta gtcttaacat ttgcagtcct tgtgtcactg tcttctgggc ctgatgtagt
1320
cccactgttt ctagaagtct cttttaagca ttatttttga aaaaaaaaaat atttttatag
1380
atgaatactc aggctaacct agtggatgtg atcttggaa ttccatgatt atccacttaa
1440
agatcaaagt attatatgct gtgtgctttt taggtgtttg ttagtactgt gaaggcaaaa
1500
atgctttcta cattgacatt cattcctatt ttactgggca cctatgaatg tatgctgtgt
1560
gctagaaaata gactaaaaca tattcctata gcatgttagt gtgtttgcat gtttgctgaa
1620
aatcctttgt gtataaacca gtttgtaagg ttctctgggt taggtaggga ctctgcagtt
1680
tcttcctgtc aaaatctctc ctaccaagat ggtgttccac tgtccagccc agcatgagta
1740
gcaggtagag cacagcttta ctggctgttt gtatgctttg gtttagtgca atgtgtggta
1800
gattacttat cagaaaacat atatgtcatc tctagaacga agaaaaagca tagtagttca
1860
attcccagtg tgtccctttg attttttttt tttaatagta aaaataagaa tctgtactga
1920
cttttcactt ggccattctg gttttaaagg acaagctaca agctctgtgt ttctgtactg
1980
atgtgtcact tattaataac ttttgtacca tgagtaaaac ttcaggtgtt tcgcaagaac
2040
caccattctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
2086

<210> 3446

<211> 169

<212> PRT

<213> Homo sapiens

<400> 3446

Met Asp Ala Leu Glu Gly Glu Ser Phe Ala Leu Ser Phe Ser Ser Ala

1	5	10	15
Ser Asp Ala Glu Phe Asp Ala Val Val Gly Tyr Leu Glu Asp Ile Ile			
20	25	30	
Met Asp Asp Glu Phe Gln Leu Leu Gln Arg Asn Phe Met Asp Lys Tyr			
35	40	45	
Tyr Leu Glu Phe Glu Asp Thr Glu Glu Asn Lys Leu Ile Tyr Thr Pro			
50	55	60	
Ile Phe Asn Glu Tyr Ile Ser Leu Val Glu Lys Tyr Ile Glu Glu Gln			
65	70	75	80
Leu Leu Gln Arg Ile Pro Glu Phe Asn Met Ala Ala Phe Thr Thr Thr			
85	90	95	
Leu His His Leu Phe Arg Leu Arg His His Lys Asp Glu Val Ala Gly			
100	105	110	
Asp Ile Phe Asp Met Leu Leu Thr Phe Thr Asp Phe Leu Ala Phe Lys			
115	120	125	
Glu Met Phe Leu Asp Tyr Arg Ala Glu Lys Glu Gly Arg Gly Leu Asp			
130	135	140	
Leu Ser Ser Gly Leu Val Val Thr Ser Leu Cys Lys Ser Ser Ser Leu			
145	150	155	160
Pro Ala Ser Gln Asn Asn Leu Arg His			
165			

<210> 3447

<211> 936

<212> DNA

<213> Homo sapiens

<400> 3447

acgcgtgaag ggtttgcggg gaagatggag tatcccgcgc cggccacggt gcaggccgcg
 60
 gacggcggag cggccggggc ttacagcagc tcggagttgc tggagggcca ggagccggac
 120
 ggggtgcgct ttgaccgcga gagggcgcgc cgctgtggg aagccgtgtc cggtgcccag
 180
 ccggtgggta gagaggaagt ggagcacatg atccagaaga accaatgtct cttcaccaac
 240
 acccagtgtg aggtttgctg cgccttgctt atttctgagt cccagaagct ggacattac
 300
 cagagcaaaa aacatgccaa caaagtgaag agatacctag caatccatgg aatggagaca
 360
 ttaaaggggg aaacgaagaa gctagactca gatcagaaga gcagcagaag caaagacaag
 420
 aaccagtgtg gcccctctg taacatgacc ttttcctccc ctgtcgtggc ccagtcgcac
 480
 tacctgggga agaccacgc aaagaactta aagctgaagc agcagtccac taagtgga
 540
 gccttgacc agaatagaga gatgatagac ccagacaagt tctgcagcct ctgccatgca
 600
 actttcaacg acctgtcat ggctcaacaa cattatgtgg gcaagaaaca cagaaaacag
 660
 gagaccaagc taaactaat ggcacgctat gggcggctgg cggaccctgc tgtcactgac
 720
 tttccagctg gaaagggcta cccctgcaaa acatgtaaga tagtgctgaa ctccatagaa
 780

cagtaccaag ctcatgtcag cggcttcaaa cacaagaacc agtcaccaa aacagtggca
 840
 tcatccctgg gccagattcc aatgcaaagg caacccattc agaaagactc aaccaccttg
 900
 gaagactaga ggtgattctg cccagcatcc catatt
 936

<210> 3448

<211> 302

<212> PRT

<213> Homo sapiens

<400> 3448

Thr	Arg	Glu	Gly	Phe	Ala	Gly	Lys	Met	Glu	Tyr	Pro	Ala	Pro	Ala	Thr
1				5					10					15	
Val	Gln	Ala	Ala	Asp	Gly	Gly	Ala	Ala	Gly	Pro	Tyr	Ser	Ser	Ser	Glu
			20					25					30		
Leu	Leu	Glu	Gly	Gln	Glu	Pro	Asp	Gly	Val	Arg	Phe	Asp	Arg	Glu	Arg
		35					40					45			
Ala	Arg	Arg	Leu	Trp	Glu	Ala	Val	Ser	Gly	Ala	Gln	Pro	Val	Gly	Arg
		50				55					60				
Glu	Glu	Val	Glu	His	Met	Ile	Gln	Lys	Asn	Gln	Cys	Leu	Phe	Thr	Asn
65					70					75					80
Thr	Gln	Cys	Lys	Val	Cys	Cys	Ala	Leu	Leu	Ile	Ser	Glu	Ser	Gln	Lys
				85					90					95	
Leu	Ala	His	Tyr	Gln	Ser	Lys	Lys	His	Ala	Asn	Lys	Val	Lys	Arg	Tyr
			100					105					110		
Leu	Ala	Ile	His	Gly	Met	Glu	Thr	Leu	Lys	Gly	Glu	Thr	Lys	Lys	Leu
		115					120					125			
Asp	Ser	Asp	Gln	Lys	Ser	Ser	Arg	Ser	Lys	Asp	Lys	Asn	Gln	Cys	Cys
		130				135					140				
Pro	Ile	Cys	Asn	Met	Thr	Phe	Ser	Ser	Pro	Val	Val	Ala	Gln	Ser	His
145					150					155					160
Tyr	Leu	Gly	Lys	Thr	His	Ala	Lys	Asn	Leu	Lys	Leu	Lys	Gln	Gln	Ser
				165					170					175	
Thr	Lys	Val	Glu	Ala	Leu	His	Gln	Asn	Arg	Glu	Met	Ile	Asp	Pro	Asp
			180					185					190		
Lys	Phe	Cys	Ser	Leu	Cys	His	Ala	Thr	Phe	Asn	Asp	Pro	Val	Met	Ala
		195					200					205			
Gln	Gln	His	Tyr	Val	Gly	Lys	Lys	His	Arg	Lys	Gln	Glu	Thr	Lys	Leu
		210				215					220				
Lys	Leu	Met	Ala	Arg	Tyr	Gly	Arg	Leu	Ala	Asp	Pro	Ala	Val	Thr	Asp
225					230					235					240
Phe	Pro	Ala	Gly	Lys	Gly	Tyr	Pro	Cys	Lys	Thr	Cys	Lys	Ile	Val	Leu
			245						250					255	
Asn	Ser	Ile	Glu	Gln	Tyr	Gln	Ala	His	Val	Ser	Gly	Phe	Lys	His	Lys
			260					265					270		
Asn	Gln	Ser	Pro	Lys	Thr	Val	Ala	Ser	Ser	Leu	Gly	Gln	Ile	Pro	Met
		275					280						285		
Gln	Arg	Gln	Pro	Ile	Gln	Lys	Asp	Ser	Thr	Thr	Leu	Glu	Asp		
		290				295					300				

<210> 3449

<211> 877

<212> DNA

<213> Homo sapiens

<400> 3449

```

ntgatcttca gcaaccatca ccaccggcta cagctgaagg cagctccggc ctctccaat
60
ccccccggcg ccccggtctt gccgctgcac aattcctccg tgactgccaa ctcccagtcc
120
ccggcccttc tggccggcac caaccccggt gctgtcgtcg cggatggagg cagttgcccc
180
gcacactacc cgggtgcacga gtgcgtcttc aaggggggatg tgaggagact ctctctctc
240
atccgcacgc acaatatcgg gcagaaagat aatcacggaa atactccttt acaccttgct
300
gtgatgttag gaaataaaga atgtgcccat ttacttttgg ctcaaatgc tccagtcaag
360
gtgaaaaatg ctccgggatg gagccctctg gcggaagcca tcagctatgg agataggcag
420
atgattacag ctcttttgag gaagcttaag cagcaatcca gggaaagtgt tgaagaaaaa
480
cgacctcgat tattaagaag cctgaaagag ctaggtgact tttatctaga acttcactgg
540
gattttcaaa gctgggtgcc ttacttttcc cgaattctgc cttccgatgc atgtaaaata
600
tacaacaag gtatcaatat caggcttgac acaactctca tagactttac tgacatgaag
660
tgccaacgag gggatctaag cttcattttc aatgggggatg cggcgccctc tgaatctttt
720
gtagtattag acaatgaaca aaaagtttat cagcgaatac atcatgaggc tcacatccca
780
ggaatcagag atggaaacag aagaagaggt ggatatttta atgagcagtg atatttactc
840
tgcaacttta tcaacaaaat caatttcttt cacgcgt
877

```

<210> 3450

<211> 276

<212> PRT

<213> Homo sapiens

<400> 3450

```

Xaa Ile Phe Ser Asn His His His Arg Leu Gln Leu Lys Ala Ala Pro
 1           5           10           15
Ala Ser Ser Asn Pro Pro Gly Ala Pro Ala Leu Pro Leu His Asn Ser
          20           25           30
Ser Val Thr Ala Asn Ser Gln Ser Pro Ala Leu Leu Ala Gly Thr Asn
          35           40           45
Pro Val Ala Val Val Ala Asp Gly Gly Ser Cys Pro Ala His Tyr Pro
          50           55           60
Val His Glu Cys Val Phe Lys Gly Asp Val Arg Arg Leu Ser Ser Leu
65           70           75           80
Ile Arg Thr His Asn Ile Gly Gln Lys Asp Asn His Gly Asn Thr Pro
          85           90           95
Leu His Leu Ala Val Met Leu Gly Asn Lys Glu Cys Ala His Leu Leu

```

	100		105		110										
Leu	Ala	His	Asn	Ala	Pro	Val	Lys	Val	Lys	Asn	Ala	Gln	Gly	Trp	Ser
	115						120					125			
Pro	Leu	Ala	Glu	Ala	Ile	Ser	Tyr	Gly	Asp	Arg	Gln	Met	Ile	Thr	Ala
	130						135					140			
Leu	Leu	Arg	Lys	Leu	Lys	Gln	Gln	Ser	Arg	Glu	Ser	Val	Glu	Glu	Lys
145					150					155					160
Arg	Pro	Arg	Leu	Leu	Lys	Ala	Leu	Lys	Glu	Leu	Gly	Asp	Phe	Tyr	Leu
			165						170					175	
Glu	Leu	His	Trp	Asp	Phe	Gln	Ser	Trp	Val	Pro	Leu	Leu	Ser	Arg	Ile
		180						185					190		
Leu	Pro	Ser	Asp	Ala	Cys	Lys	Ile	Tyr	Lys	Gln	Gly	Ile	Asn	Ile	Arg
	195						200					205			
Leu	Asp	Thr	Thr	Leu	Ile	Asp	Phe	Thr	Asp	Met	Lys	Cys	Gln	Arg	Gly
	210				215						220				
Asp	Leu	Ser	Phe	Ile	Phe	Asn	Gly	Asp	Ala	Ala	Pro	Ser	Glu	Ser	Phe
225					230					235					240
Val	Val	Leu	Asp	Asn	Glu	Gln	Lys	Val	Tyr	Gln	Arg	Ile	His	His	Glu
				245					250					255	
Ala	His	Ile	Pro	Gly	Ile	Arg	Asp	Gly	Asn	Arg	Arg	Arg	Gly	Gly	Tyr
			260					265					270		
Phe	Asn	Glu	Gln												
			275												

<210> 3451

<211> 595

<212> DNA

<213> Homo sapiens

<400> 3451

```

gcatttttac agtttgata tcccatttcc aaggcttcag tggggctgct tagacaaaa
60
cgatcttcag ggtttacaga atgggtcctc cttaaagctct ctgagccccg gccgtaggta
120
gaaatattca gtaagtagtg ccctgccatt gcaggtttgg atgtccttct gccagcaaaa
180
cccagcatga acctctggct tgtggagatg tcttcagct ggaaacctga gtgagcgaag
240
ttgaactgtg agggcgac aactgagaga agattctgcc tccgaaccct ctgaatgaga
300
gtctgaagga tctgatcttg ggttgcttta cttagtcctt cgtggtattg gtgtgtgtca
360
atgctggagt ccctcagctc cttagctgaa aagagctgaa ggggccttgg aacctggggg
420
agctgcttac tttgcaaggt tttgccagc tgctgctgcg tagctggatg ggactgtctc
480
tcattaactt cctctctggt gctattttct gttgtgttgg tagctatgag cgctcccatc
540
cccctttcct cttttgcagg caggggaacc gcttccattt caactttggg gagag
595

```

<210> 3452

<211> 192

<212> PRT

<213> Homo sapiens

<400> 3452

```

Met Glu Ala Val Pro Leu Pro Ala Lys Glu Glu Arg Gly Met Gly Ala
 1           5           10           15
Leu Ile Ala Thr Asn Thr Thr Glu Asn Ser Thr Arg Glu Glu Val Asn
      20           25           30
Glu Arg Gln Ser His Pro Ala Thr Gln Gln Gln Leu Gly Lys Thr Leu
      35           40           45
Gln Ser Lys Gln Leu Pro Gln Val Pro Arg Pro Leu Gln Leu Phe Ser
      50           55           60
Ala Lys Glu Leu Arg Asp Ser Ser Ile Asp Thr His Gln Tyr His Glu
65           70           75           80
Gly Leu Ser Lys Ala Thr Gln Asp Gln Ile Leu Gln Thr Leu Ile Gln
      85           90           95
Arg Val Arg Arg Gln Asn Leu Leu Ser Val Val Pro Pro Ser Gln Phe
      100          105          110
Asn Phe Ala His Ser Gly Phe Gln Leu Glu Asp Ile Ser Thr Ser Gln
      115          120          125
Arg Phe Met Leu Gly Phe Ala Gly Arg Arg Thr Ser Lys Pro Ala Met
      130          135          140
Ala Gly His Tyr Leu Leu Asn Ile Ser Thr Tyr Gly Arg Gly Ser Glu
145          150          155          160
Ser Phe Arg Arg Thr His Ser Val Asn Pro Glu Asp Arg Phe Cys Leu
      165          170          175
Ser Ser Pro Thr Glu Ala Leu Lys Met Gly Tyr Thr Asn Cys Lys Asn
      180          185          190

```

<210> 3453

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3453

```

nnacgcgtga aggggtcccgg ccgcggggct ggcgggctga ggggagaaaa gatggcggcg
60
gcggcggcag ctggtgcggc ctccgggctg ccgggtccag tggcacaagg attaaaggaa
120
gcgttagtggt atacgctcac cgggataccta tccccagtag aggaggtgcg ggcggctgct
180
gaagaacaga ttaaggtgct ggaggtgacg gaggaatttg gtgttcactt ggcagaactg
240
actgtagatc cccagggggc actggcaatc cgtcagctgg catcagtcac cttgaaacaa
300
tatgtggaga ctactggtg tgcccaatca gagaaattta ggctcctga aactacagaa
360
agggcaaaaa ttgttatccg ggagctattg cctaattggg tgagagaatc gataagcaaa
420
gtgcgctcca gtgtggccta tgcagtgtca gccattgccc actgggactg gcctgaa
477

```

<210> 3454

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3454

Xaa Arg Val Lys Gly Pro Gly Arg Gly Ala Gly Gly Leu Arg Gly Glu
 1 5 10 15
 Lys Met Ala Ala Ala Ala Ala Gly Ala Ala Ser Gly Leu Pro Gly
 20 25 30
 Pro Val Ala Gln Gly Leu Lys Glu Ala Leu Val Asp Thr Leu Thr Gly
 35 40 45
 Ile Leu Ser Pro Val Gln Glu Val Arg Ala Ala Ala Glu Glu Gln Ile
 50 55 60
 Lys Val Leu Glu Val Thr Glu Glu Phe Gly Val His Leu Ala Glu Leu
 65 70 75 80
 Thr Val Asp Pro Gln Gly Ala Leu Ala Ile Arg Gln Leu Ala Ser Val
 85 90 95
 Ile Leu Lys Gln Tyr Val Glu Thr His Trp Cys Ala Gln Ser Glu Lys
 100 105 110
 Phe Arg Pro Pro Glu Thr Thr Glu Arg Ala Lys Ile Val Ile Arg Glu
 115 120 125
 Leu Leu Pro Asn Gly Leu Arg Glu Ser Ile Ser Lys Val Arg Ser Ser
 130 135 140
 Val Ala Tyr Ala Val Ser Ala Ile Ala His Trp Asp Trp Pro Glu
 145 150 155

<210> 3455

<211> 4886

<212> DNA

<213> Homo sapiens

<400> 3455

nncttcggca caggattgat ccagtcctcc ttccttcact accacatgaa tgctgggcag
 60
 cccaggatca cactcaactgc accctcaact cagaccgtta cctggcacac tggcctcact
 120
 cttgtcggag actgagctat tggcagtgcc ttcagctctg agctcaggca cctcgaacat
 180
 tgtttttgtc gttaaggatc ctaaagtgtc gtggggagtgtg atcacatttt tctcaacatc
 240
 cctggcccca cctcttctgc cacaaacgtc agcatggtgg tatcagccgg ccctttgtcc
 300
 agcgagaagg cagagatgaa cattctagaa atcaatgaga aattgcgccc ccagttggca
 360
 gagaagaaac agcagttcag aaacctcaaa gagaaatgtt ttctaactca actggccggc
 420
 ttcctggcca accgacagaa gaaatacaaa tatgaagagt gtaaagatct cataaaattt
 480
 atgctgagga atgagcgaca gttcaaggag gagaagcttg cagagcagct caagcaagct
 540
 gaggagctca ggcaatataa agtcctgggt cagctcagg aacgagagct gaccagtta
 600
 agggagaagt tacgggaagg gagagatgcc tcccgtcat tgaatgagca tctccaggcc
 660
 ctcctcactc cggatgagcc ggacaagtcc caggggcagg acctccaaga acagctggct
 720

gaggggtgta ggctggcaca gcacctcgtc caaaagctca gcccagaaaa tgacaacgat
780
gacgatgaag atgttcaagt tgaggtggct gagaaagtgc agaaatcgtc tgccccagg
840
gagatgcaga aggctgaaga aaaggaagtc cctgaggact cactggagga atgtgccatc
900
acttgttcaa atagccatgg cccttatgac tccaaccagc cacataagaa aacaaaaatc
960
acatttgagg aagacaaagt cgactcaact ctcatgtgct catcctctca tgttgaatgg
1020
gaggatgctg tacacattat tccagaaaat gaaagtgatg atgaggaaga ggaagaaaaa
1080
gggccagtgt ctcccaggaa tctgcaggag tctgaagagg aggaagtccc ccaggagtcc
1140
tgggatgaag gttattcgac tctctcaatt cctcctgaaa tgttggcctc gtacaagtct
1200
tacagcagca catttcactc attagaggaa cagcaagtct gcatggctgt tgacataggc
1260
agacatcggg gggatcaagt gaaaaaggag gaccacgagg caacagggtcc caggctcagc
1320
agagagctgc tggatgagaa agggcctgaa gtcttgcagg actcactgga tagatgttat
1380
tcaactcctt caggttgtct tgaactgact gactcatgcc agccctacag aagtgccttt
1440
tacgtattgg agcaacagcg tgttggcttg gctgttgaca tggatgaaat tgaaaagtac
1500
caagaagtgg aagaagacca agacccatca tgccccaggc tcagcaggga gctgctggat
1560
gagaaagagc ctgaagtctt gcaggactca ctggatagat gttattcgac tccttcaggt
1620
tatcttgaac tgctgactt aggccagccc tacagcagtg ctgtttactc attggaggaa
1680
cagtaccttg gcttggctct tgacgtggac agaattaaaa aggaccaaga agaggaagaa
1740
gaccaaggcc caccatgccc caggctcagc agggagctgc tggaggtagt agagcctgaa
1800
gtcttgcagg actcactgga tagatgttat tcaactcctt ccagttgtct tgaacagcct
1860
gactcctgcc agccctatgg aagttccttt tatgcattgg aggaaaagca tgttggcttt
1920
tctcttgacg tgggagaaat tgaaaagaag gggaagggga agaaaagaag gggaagaaga
1980
tcaaagaagg aaagaagaag gggaagaaaa gaaggggaag aagatcaaaa ccaccatgc
2040
cccaggctca gcaggagct gctggatgag aaagggcctg aagtcttgca ggactcactg
2100
gatagatgtt attcaactcc ttcaggttgt cttgaactga ctgactcatg ccagccctac
2160
agaagtgcct ttacatatt ggagcaacag tgtgttggct tggctgttga catggatgaa
2220
attgaaaagt accaagaagt ggaagaagac caagacccat catgccccag gctcagcggg
2280
gagctgttgg atgagaaaga gcctgaagtc ttgcaggagt cactggatag atgctattca
2340

actccttcag gttgtcttga actgactgac tcatgccagc cctacagaag tgccttttac
2400
atattggagc aacagcgtgt tggcttggct gttgacatgg atgaaattga aaagtaccaa
2460
gaagtggaag aagaccaaga cccatcatgc cccaggctca gcagggagct gctggatgag
2520
aaagagcctg aagtcttgca ggactcactg gatagatggt attcgactcc ttcaggttat
2580
cttgaactgc ctgacttagg ccagccctac agcagtgtctg tttactcatt ggaggaacag
2640
taccttggct tggctcttga cgtggacaga attaaaaagg accaagaaga ggaagaagac
2700
caaggcccac catgccccag gctcagcagg gagctgtctg aggtagtaga gcctgaagtc
2760
ttgcaggact cactggatag atgttattca actccttcca gttgtcttga acagcctgac
2820
tcctgccagc cctatggaag ttccctttat gcattggagg aaaaacatgt tggcttttct
2880
cttgacgtgg gagaaattga aaagaagggg aaggggaaga aaagaagggg aagaagatca
2940
aagaagcaaa gaagaagggg aagaaaagaa ggggaagaag atcaaaaccc accatgcccc
3000
aggctcaacg gtgtgctgat ggaagtggaa gagcctgaag tcttacagga ctactggat
3060
agatgttatt cgactccgtc aatgtacttt gaactacctg actcattcca gcactacaga
3120
agtgtgtttt actcatttga ggaagagcac atcagcttcg ccctttacgt ggacaatagg
3180
ttttttactt tgacggtgac aagtctccac ctggtgttcc agatgggagt catattccca
3240
caataagcag cccttactaa tccgagagat gtcattcctg caggcaggac ctataggcaa
3300
gtgaagattt gaatgaaagt acagttccat ttggaagccc agacatagga tgggtcagtg
3360
ggcatggctc tattcctatt ctcaaaccat gccagtggca acctgtgctc agtctgaaga
3420
caatggaccc aagttaggtg tgacacgttc acataactgt gcagcacatg ccgggagtg
3480
tcagtcggac attttaattt gaaccacgta tctctgggta gctacaaaat tcctcaggg
3540
tttcattttg caggcatgtc tctgagcttc tatacctgct caaggtcatt gtcacttttg
3600
tgtttagctc atccaaaggt gttaccctgg tttcaatgaa cctaacctca ttctttgtat
3660
cttcagtgtt gaattgtttt agctgatcca tctgtaacac aggagggatc cttggctgag
3720
gattgtattht cagaaccacc aactgctctt gacaattgtt aaccactag gtccttttgg
3780
ttagagaagc cacagtcctt cagcctccaa ttggtgtcag tacttaggaa gaccacagct
3840
agatggacaa acagcattgg gaggccttag ccctgtcctt ctcaattcca tcctgtagag
3900
aacaggagtc aggagccgct ggcaggagac agcatgtcac ccaggactct gccggtgcag
3960

aatatgaaca atgccatggt cttgcagaaa acgcttagcc tgagtttcat aggaggtaat
 4020
 caccagacaa ctgcagaatg tggaacactg agcaggacaa ctgacctgtc tccttcacat
 4080
 agtccatatt accacaaatc acacaacaaa aaggagaaga gatatttttg gttcaaaaaa
 4140
 agtaaaaaga taatgtagct gcatttcttt agttattttg ggcccaaat atttcctcat
 4200
 ctttttggtg ttgtcattga tgggtggtgac atggacttgt ttatagagga caggtcagct
 4260
 gtctggctca atgatctaca ttctgaagtt gtctgaaaat gtcttcatga ttaaattcag
 4320
 cctaaacggt ttgccgggaa cactgcagag acaatgctgt gagtttccaa cctcagccca
 4380
 tctgcgggca gagaaggtct agtttgtcca tcaccattat catgatata ggactgggta
 4440
 cttgggtaag gaggggtcta ggagatctgt ccctttttaga gacaccttac ttataatgaa
 4500
 gaagtacttg ggaaagtggg ttccaagagt ataaatatcc tgtattctaa tgatcatcct
 4560
 ctaaacattt tatcatttat taatcctccc tgccgtgtgtc tattattata ttcatatctc
 4620
 tacactgcaa aatttggggg ctcaattttt actgtgcctt tgtttttact agtgtctgct
 4680
 gttgcaaaaa gaagaaaaca ttctctgcct gagttttaat ttttgtccaa agttaatttt
 4740
 aatctataca attaaaagct tttgcctatc actctggact tttggattgt tttttacatt
 4800
 cagtgttata atattttggt atgctgattg gttttggtgg gtactgatgt gaattaataa
 4860
 aaacatttca tttccaaaaa aaaaaa
 4886

<210> 3456

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3456

Glu	Ile	Glu	Lys	Lys	Gly	Lys	Gly	Lys	Lys	Arg	Arg	Gly	Arg	Arg	Ser
1				5					10					15	
Lys	Lys	Gln	Arg	Arg	Arg	Gly	Arg	Lys	Glu	Gly	Glu	Glu	Asp	Gln	Asn
			20					25					30		
Pro	Pro	Cys	Pro	Arg	Leu	Asn	Gly	Val	Leu	Met	Glu	Val	Glu	Glu	Pro
		35					40					45			
Glu	Val	Leu	Gln	Asp	Ser	Leu	Asp	Arg	Cys	Tyr	Ser	Thr	Pro	Ser	Met
	50					55					60				
Tyr	Phe	Glu	Leu	Pro	Asp	Ser	Phe	Gln	His	Tyr	Arg	Ser	Val	Phe	Tyr
65					70					75				80	
Ser	Phe	Glu	Glu	Glu	His	Ile	Ser	Phe	Ala	Leu	Tyr	Val	Asp	Asn	Arg
				85					90					95	
Phe	Phe	Thr	Leu	Thr	Val	Thr	Ser	Leu	His	Leu	Val	Phe	Gln	Met	Gly
			100					105					110		
Val	Ile	Phe	Pro	Gln											

115

<210> 3457
 <211> 646
 <212> DNA
 <213> Homo sapiens

<400> 3457
 acgcgtgact ttgtatccat gtccagggtgt ccatgcgcct gtgtgtgcag atgtgtcnct
 60
 gtccctgggt gtgtctgtgc ctgtgtgtgc gttgatattct gtgcctgcct cttcacacat
 120
 aggtgggaat gcagagtgtg tattctttgt nnatgcacct gtacacaggc tngggcgggc
 180
 aagtgaggat gcgtatgtnn ggttggtgtgt gtctgtatct gcatttgcat gngtgtattg
 240
 gagattggag ctgtgtgtgt gtgcgtgtgt gtagtgtgta ccgtgtgcac atgtatgtgt
 300
 gtgcctgtgg accagcacct gtgttgccac atttggtga cggtagatcc atgcactnng
 360
 gtctgcaggt gtatttgca gtgcgtgtgt ctgtctaaca cactctgtag atgtcgccgc
 420
 ctgaatgaga gccagagcag agctctcccc agcccttccc aagtactgtt cccctctacc
 480
 gacgactccc cagttctctc cttccctgat gcaatgcacg cctagtgggc tacgtgtgcc
 540
 aaccctccag gccttctcct gccacaggct ctgtctctgt cccgtcgtg tgccctctgc
 600
 ccctgctaac ccagccctcc gtgccttgga tgcgcccga catggc
 646

<210> 3458
 <211> 61
 <212> PRT
 <213> Homo sapiens

<400> 3458
 Thr Arg Asp Phe Val Ser Met Ser Arg Cys Pro Cys Ala Cys Val Cys
 1 5 10 15
 Arg Cys Val Xaa Val Pro Gly Cys Val Cys Ala Cys Val Cys Val Asp
 20 25 30
 Ile Cys Ala Cys Leu Phe Thr His Arg Trp Glu Cys Arg Val Cys Ile
 35 40 45
 Leu Cys Xaa Cys Thr Cys Thr Gln Ala Xaa Ala Gly Lys
 50 55 60

<210> 3459
 <211> 592
 <212> DNA
 <213> Homo sapiens

<400> 3459
 acgcgtcctg ggctgggtga ccctagcgtt ctagatatag cctcttatct tggcaccag
 60

gggcatactg gggccctct tttcctgagc tggggagcaa ggtgccagga ggtggctggg
 120
 gaccctactt cactgcaggg ggctcagccc agtctgcctc aggcagaaca agggctctggg
 180
 ggtggctgtg gggggctgtg gatgggtccc agtgggcctg ctgccactcc caccacatgg
 240
 gacctgcctt ccggccctgc caggattcca gtctgcctt gctcacccca gcttccaggc
 300
 ccttcctgt gtgcagcctc agtttgctg ctgcagaata agcaccacgc tccctcgtgg
 360
 gcagaggcac cggcagactc accacgcgcc ctgcaggcat gtcctgtgct gtgccaggca
 420
 ggccccggcc acgtccctgc ccccgagct ggccttcagc ggggacagtg gtcagcactg
 480
 aagacagtca tacctgcccg gccggcactg ccctgctcag cacggggaca atttgaactt
 540
 aagctttaac ttaattaaaa tgaactaaaa ttaaaaaaaaa aaaaaaaaaa aa
 592

<210> 3460

<211> 115

<212> PRT

<213> Homo sapiens

<400> 3460

Met	Gly	Pro	Ser	Gly	Pro	Ala	Ala	Thr	Pro	Thr	Thr	Trp	Asp	Leu	Pro
1				5					10					15	
Ser	Gly	Pro	Ala	Arg	Ile	Pro	Val	Leu	Pro	Cys	Ser	Pro	Gln	Leu	Pro
			20					25					30		
Gly	Pro	Ser	Leu	Cys	Ala	Ala	Ser	Val	Cys	Leu	Leu	Gln	Asn	Lys	His
			35				40					45			
His	Ala	Pro	Ser	Trp	Ala	Glu	Ala	Pro	Ala	Asp	Ser	Pro	Arg	Ala	Leu
			50			55				60					
Gln	Ala	Cys	Pro	Val	Leu	Cys	Gln	Ala	Gly	Pro	Gly	His	Val	Pro	Ala
65					70					75				80	
Pro	Gly	Ala	Gly	Leu	Gln	Arg	Gly	Gln	Trp	Ser	Ala	Leu	Lys	Thr	Val
			85					90					95		
Ile	Pro	Ala	Arg	Pro	Ala	Leu	Pro	Cys	Ser	Ala	Arg	Gly	Gln	Phe	Glu
			100					105					110		
Leu	Lys	Leu													
			115												

<210> 3461

<211> 474

<212> DNA

<213> Homo sapiens

<400> 3461

ttgctgttcc aggcctagt gtccgttttt gtgggtgcagc tgcagctcca cgtcggctac
 60
 ttctgtctgg gtgcatacct ttgtgccctc ctcggcgact tcgggggcct tctggctgct
 120
 agctttgcgt ccgtggcaga tgtcagctcc agtcgcagcc gcaccttcg gatggcctg
 180

ctggaagcca gcatcgggggt ggctgggatg ctggcaagcc tcctcggggg cactgggtc
 240
 cgggcccagg gttatgccaa ccccttcttg ctggccttgg ccttgctgat agccatgact
 300
 ctctatgcag ctttctgctt tggtagagacc ttaaaggagc caaagtccac ccggtcttcc
 360
 acgttccgtc accaccgatc cattgtccag ctctatgtgg ctcccgcccc agagaagtcc
 420
 aggaaacatt tagccctcta ctactggcc atcttcgtgg tgatcactgt gcac
 474

<210> 3462

<211> 101

<212> PRT

<213> Homo sapiens

<400> 3462

Met	Ala	Leu	Leu	Glu	Ala	Ser	Ile	Gly	Val	Ala	Gly	Met	Leu	Ala	Ser
1				5				10					15		
Leu	Leu	Gly	Gly	His	Trp	Leu	Arg	Ala	Gln	Gly	Tyr	Ala	Asn	Pro	Phe
		20						25					30		
Trp	Leu	Ala	Leu	Ala	Leu	Leu	Ile	Ala	Met	Thr	Leu	Tyr	Ala	Ala	Phe
		35					40					45			
Cys	Phe	Gly	Glu	Thr	Leu	Lys	Glu	Pro	Lys	Ser	Thr	Arg	Leu	Phe	Thr
	50					55					60				
Phe	Arg	His	His	Arg	Ser	Ile	Val	Gln	Leu	Tyr	Val	Ala	Pro	Ala	Pro
65					70					75				80	
Glu	Lys	Ser	Arg	Lys	His	Leu	Ala	Leu	Tyr	Ser	Leu	Ala	Ile	Phe	Val
				85					90					95	
Val	Ile	Thr	Val	His											
				100											

<210> 3463

<211> 1734

<212> DNA

<213> Homo sapiens

<400> 3463

nngaggcgcc ggcttcggag tgcgcccgcc gccgcagcag cagcgctcct ggaggacccc
 60
 gccgtccccc ggctcaccgc tgcccttctt gctgctgagc taccgagcgc gcggcggcgg
 120
 cagcagcggc agggcaagca ccataccta tctctcatgg ctaatgaacg catgaacctc
 180
 atgaacatgg ccaagctgag tatcaagggc ttgattgaat cagctctgaa cctggggagg
 240
 actcttgact ctgactatgc acctctccag caattctttg tggtagatgga gcactgtctg
 300
 aaacatggct tgaaagctaa aaaaactttt ctccgacaaa ataaatcctt ctggggggcct
 360
 ctagaactgg tagaaaagct tgttcagaa gccgcagaga taacagcaag tgttaaagat
 420
 cttccaggac ttaagacacc agtaggtaga ggaagagcct ggcttcgttt ggcattaatg
 480

caaaagaaac tttcagaata tatgaaagct ttgatcaata agaaagaact tctcagtga
 540
 ttctacgaac ccaatgccct catgatggaa gaagaaggag ccataattgc tggctctgtg
 600
 gtgggtctga atgtcattga tgccaatttc tgtatgaaag gagaagactt ggactctcag
 660
 gttggagtta tagatttttc aatgtatctc aaggacggga acagcagtaa aggtactgaa
 720
 ggagacggtc agattactgc aattctggac cagaagaact atgtagaaga actgaacaga
 780
 catttgaatg ctactgtaaa caaccttcag gcaaaagtag atgcattaga aaaatccaac
 840
 actaaactga cagaggagct tgcagttgca aacaacagga tcattacctt acaagaagaa
 900
 atggaacgag ttaaagagga aagttcctac atactggaat ccaatcggaa ggggtcccaag
 960
 caagacagaa ctgcagaagg gcaagcacta agtgaagcaa gaaagcattt aaaagaagag
 1020
 acacaattac gattggatgt tgagaaagaa ctggagatgc agatcagcat gaggcaggag
 1080
 atggaattgg ctatgaagat gctggagaag gatgtctgtg agaagcagga tgccttggt
 1140
 tctcttcggc agcagctgga tgacctcaga gctctcaagc atgaacttgc ctttaagctg
 1200
 cagagttcag acttaggagt aaaacagaaa agtgaactaa acagtcgctt ggaagagaag
 1260
 actaatcaga tggctgctac cattaaacaa cttgaacaaa ggtaaaagtc ctgtttcttt
 1320
 aatgaaacac tttggattgt cagtgtgtaa gtgaaaagaa tgtgtgtgtac attcggcaaa
 1380
 tagaaaatac atgaaattct tccaaattag catcagacat tctggtagaa aaaagccagt
 1440
 tgaatgttat gtgtgttttc taaggatga ctgaaatgtt tttaggaaat gtcaatcact
 1500
 tgactagcct ttaaaaaaaaa aaaagaaagg tcagcctttt atgactgttt tgaacatcag
 1560
 aactcttaat ccatgtcaga gtcatgtgtt agaggaagga tacttaaaag catggaagga
 1620
 ctcttaaatg tatgtatgta attctgtgat tttattgttc atcactgaag tctttgaata
 1680
 cttggatgct aggggatata gaggcactga gagataggtg tcctccaagg atcc
 1734

<210> 3464

<211> 434

<212> PRT

<213> Homo sapiens

<400> 3464

Xaa	Arg	Arg	Arg	Leu	Arg	Ser	Ala	Pro	Ala	Ala	Ala	Ala	Ala	Ala	Leu
1				5				10						15	
Leu	Glu	Asp	Pro	Ala	Val	Pro	Arg	Leu	Thr	Ala	Ala	Leu	Pro	Ala	Ala
			20					25					30		
Glu	Leu	Pro	Glu	Arg	Arg	Arg	Arg	Gln	Gln	Arg	Gln	Gly	Lys	His	His

		35					40					45				
Pro	Asn	Tyr	Leu	Met	Ala	Asn	Glu	Arg	Met	Asn	Leu	Met	Asn	Met	Ala	
	50					55					60					
Lys	Leu	Ser	Ile	Lys	Gly	Leu	Ile	Glu	Ser	Ala	Leu	Asn	Leu	Gly	Arg	
65					70					75					80	
Thr	Leu	Asp	Ser	Asp	Tyr	Ala	Pro	Leu	Gln	Gln	Phe	Phe	Val	Val	Met	
				85					90					95		
Glu	His	Cys	Leu	Lys	His	Gly	Leu	Lys	Ala	Lys	Lys	Thr	Phe	Leu	Gly	
			100					105					110			
Gln	Asn	Lys	Ser	Phe	Trp	Gly	Pro	Leu	Glu	Leu	Val	Glu	Lys	Leu	Val	
		115					120					125				
Pro	Glu	Ala	Ala	Glu	Ile	Thr	Ala	Ser	Val	Lys	Asp	Leu	Pro	Gly	Leu	
	130					135					140					
Lys	Thr	Pro	Val	Gly	Arg	Gly	Arg	Ala	Trp	Leu	Arg	Leu	Ala	Leu	Met	
145					150					155					160	
Gln	Lys	Lys	Leu	Ser	Glu	Tyr	Met	Lys	Ala	Leu	Ile	Asn	Lys	Lys	Glu	
				165					170					175		
Leu	Leu	Ser	Glu	Phe	Tyr	Glu	Pro	Asn	Ala	Leu	Met	Met	Glu	Glu	Glu	
			180					185					190			
Gly	Ala	Ile	Ile	Ala	Gly	Leu	Leu	Val	Gly	Leu	Asn	Val	Ile	Asp	Ala	
		195					200					205				
Asn	Phe	Cys	Met	Lys	Gly	Glu	Asp	Leu	Asp	Ser	Gln	Val	Gly	Val	Ile	
	210					215					220					
Asp	Phe	Ser	Met	Tyr	Leu	Lys	Asp	Gly	Asn	Ser	Ser	Lys	Gly	Thr	Glu	
225					230					235					240	
Gly	Asp	Gly	Gln	Ile	Thr	Ala	Ile	Leu	Asp	Gln	Lys	Asn	Tyr	Val	Glu	
				245					250					255		
Glu	Leu	Asn	Arg	His	Leu	Asn	Ala	Thr	Val	Asn	Asn	Leu	Gln	Ala	Lys	
			260					265					270			
Val	Asp	Ala	Leu	Glu	Lys	Ser	Asn	Thr	Lys	Leu	Thr	Glu	Glu	Leu	Ala	
		275					280					285				
Val	Ala	Asn	Asn	Arg	Ile	Ile	Thr	Leu	Gln	Glu	Glu	Met	Glu	Arg	Val	
	290					295					300					
Lys	Glu	Glu	Ser	Ser	Tyr	Ile	Leu	Glu	Ser	Asn	Arg	Lys	Gly	Pro	Lys	
305					310					315					320	
Gln	Asp	Arg	Thr	Ala	Glu	Gly	Gln	Ala	Leu	Ser	Glu	Ala	Arg	Lys	His	
				325					330					335		
Leu	Lys	Glu	Glu	Thr	Gln	Leu	Arg	Leu	Asp	Val	Glu	Lys	Glu	Leu	Glu	
			340					345					350			
Met	Gln	Ile	Ser	Met	Arg	Gln	Glu	Met	Glu	Leu	Ala	Met	Lys	Met	Leu	
		355					360					365				
Glu	Lys	Asp	Val	Cys	Glu	Lys	Gln	Asp	Ala	Leu	Val	Ser	Leu	Arg		

<210> 3465

<211> 2904

<212> DNA

<213> Homo sapiens

<400> 3465

acgcgtccgc cggagcgggc catggacgcg ctcaagtcgg cggggcgggc gctgatccgg
60
agccccagct tggccaagca gagctggggg ggcggtggcc ggcaccgcaa gctgcctgag
120
aactggacag acacgcggga gacgctgctg gaggggatgc tgttcagcct caagtacctg
180
ggcatgacgc tagtggagca gcccaagggg gaggagctgt cggccgccgc catcaagagg
240
atcgtggcta cagctaaggc cagtgggaag aagctgcaga aggtgactct gaagggtgctg
300
ccacggggaa ttatcctgac agacaacctc accaaccagc tcattgagaa cgtgtccata
360
tacaggatct cctattgcac agcagacaag atgcacgaca aggtgtttgc atacatcgcc
420
cagagccagc acaaccagag cctcgagtgc cagccttcc tctgcaccaa gcggaagatg
480
gcacaggctg ttacctcac cgtagcccag gccttcaaag tcgcctttga gttttggcag
540
gtgtccaagg aagagaaaga gaagagggac aaagccagcc aagagggagg ggacgtcctg
600
ggggcccgcc aagactgcac ccccccttg aagagcttgg tcgccactgg gaacctgctg
660
gacttagagg agacggctaa ggccccgctg tccacgggtca gcgccaacac caccaacatg
720
gacgaggtgc cgcggccaca agccttgagt ggcagcagtg ttgtctggga gctggatgat
780
ggcctggatg aagcgttttc gaggettgcc cagtctcgga caaacctca ggtcctggac
840
actggcctga cagcccagga catgcattac gccagtgcc tctcgctgt cgactgggac
900
aagcctgaca gcagcggcac agagcaggat gacctcttca gcttctgagg gcccggggcc
960
agccggacac aagcggccct gacacgtgat ggaccaaagc cacctgctgc gggggagcca
1020
gttctggggc ccgcctgcca cctctcccag ccctcagcat tgtcagcctg aagatcagag
1080
ctgcagccag tcaggcaggg gagagatttt tcttttaagc cctgctcttt ctctgagaac
1140
caaaagatgc cttgaatatt tattcagtga cttctggctt atgctcagaa gccagtctgc
1200
gtcaggcacg tctcctgctg cgtgacatgt gcagtgtgt aatcggtcc cgcttgctct
1260
cctggagcaa gctctgccct ggctgtgggt atcaggactg tgaccaaagc atttctagtc
1320
ccttctctct ttctaaggac ccaaatttcc ctgggggcat cctgcttctt gaaagctgtt
1380
ggatttcagt gatTTTTCCC CCCCCCCC agcacaggag agcaccaca gccgcagaag
1440
gggaatgtgt cctcctgctc tgcttctca gggcccagca ggcgggggtt tgagccctgg
1500

accccaggct cttagagact aaggggcagc tcctgaccaa agacgataca gcttggcact
 1560
 ttaaagcatt aacagcagggt gtgaccctga gggctcctcc atggtgctgc attgagtcca
 1620
 gctttccttc tgcccttccct ccaggagaag gggcccaagg tccccgtgga tgggtctccac
 1680
 ctgtgcttgg aaccagtgtg actggctgct cctgctccc agggactgac acggggatca
 1740
 tctctgtgac cgccctccgt cggggccctg cctgccttct cccctccacg caaggctgtg
 1800
 ctcttctctt gggttctgtg tgtccgtttg agtgtctgcg cccgcctcc ccatacttcc
 1860
 tgggatgatg tgtgaaacct gacacctaga tttatttgga aatattctat gaccacttta
 1920
 cagatgagga aactgaggcc tcaagcgtgg aggggtagag tgaagagtag aaccagggtc
 1980
 tgatgccaaa gctgcttctt tctctgcctc ctctcacgc aactcacacc tccttttctt
 2040
 ctagctttgt tgtcctccca ggaacaaaaa aaccccagct attttctgaa caaaatgtgt
 2100
 ttcataacaa accatctggt gcctttccac acagaactgg caggagcctc gtgtcctgct
 2160
 agctgtctct cttgttgatt tccgtgaaaa tgcaagtgtt tgaagtctgc tcattccgag
 2220
 ggtgaaacaa aatccaaccc tgtcagaatc atgctgttct ctttgctgac actgtgaccc
 2280
 tgggtcggga cagaccagca gcaatctgtc tttagaatcg ctttccttcc tccccttttg
 2340
 cccccgtggg gctcccggca tcctgaaagc cagcaaagcc tccagcatct tttccatcct
 2400
 gaggtgcctc ccagtggcct ggcttgtcgg agcaagtctc atcagcccta gggaaaacac
 2460
 ggccctcctg ggaacctcct tacctggagt aaccggacac cttagacgga ggtgcctgag
 2520
 ggtgggggtg gatttgcagg gtcattatca gaacatgagg ataacttctt tgcccttgc
 2580
 ctgtagccac ctcttggca ccggcctcta tttgtcataa ggcggcgtgg gcgaggcctg
 2640
 acacaggcca gccttggcac gaggggggccc aggggttctg agaagcgtg ccctgtgaga
 2700
 gccatgctgc cctgtgagag ccatgctggc ctctgtctcc atctctggtt gacgggctgt
 2760
 ccgtgtgcct cctgtgtgtc tgagacaag tcttgcgtgt ctttatttgt gaaacttta
 2820
 tgaggaaaaa acaaataata aatgttctcg ttttgaaact caaaaaaaaaa aaaaaaaaaa
 2880
 aaaaaaaaaa aaaaaaaaaa aaaa
 2904

<210> 3466

<211> 315

<212> PRT

<213> Homo sapiens

<400> 3466

```

Thr Arg Pro Pro Glu Arg Ala Met Asp Ala Leu Lys Ser Ala Gly Arg
 1           5           10           15
Ala Leu Ile Arg Ser Pro Ser Leu Ala Lys Gln Ser Trp Gly Gly Gly
      20           25           30
Gly Arg His Arg Lys Leu Pro Glu Asn Trp Thr Asp Thr Arg Glu Thr
      35           40           45
Leu Leu Glu Gly Met Leu Phe Ser Leu Lys Tyr Leu Gly Met Thr Leu
      50           55           60
Val Glu Gln Pro Lys Gly Glu Glu Leu Ser Ala Ala Ala Ile Lys Arg
      65           70           75           80
Ile Val Ala Thr Ala Lys Ala Ser Gly Lys Lys Leu Gln Lys Val Thr
      85           90           95
Leu Lys Val Ser Pro Arg Gly Ile Ile Leu Thr Asp Asn Leu Thr Asn
      100          105          110
Gln Leu Ile Glu Asn Val Ser Ile Tyr Arg Ile Ser Tyr Cys Thr Ala
      115          120          125
Asp Lys Met His Asp Lys Val Phe Ala Tyr Ile Ala Gln Ser Gln His
      130          135          140
Asn Gln Ser Leu Glu Cys His Ala Phe Leu Cys Thr Lys Arg Lys Met
      145          150          155          160
Ala Gln Ala Val Thr Leu Thr Val Ala Gln Ala Phe Lys Val Ala Phe
      165          170          175
Glu Phe Trp Gln Val Ser Lys Glu Glu Lys Glu Lys Arg Asp Lys Ala
      180          185          190
Ser Gln Glu Gly Gly Asp Val Leu Gly Ala Arg Gln Asp Cys Thr Pro
      195          200          205
Pro Leu Lys Ser Leu Val Ala Thr Gly Asn Leu Leu Asp Leu Glu Glu
      210          215          220
Thr Ala Lys Ala Pro Leu Ser Thr Val Ser Ala Asn Thr Thr Asn Met
      225          230          235          240
Asp Glu Val Pro Arg Pro Gln Ala Leu Ser Gly Ser Ser Val Val Trp
      245          250          255
Glu Leu Asp Asp Gly Leu Asp Glu Ala Phe Ser Arg Leu Ala Gln Ser
      260          265          270
Arg Thr Asn Pro Gln Val Leu Asp Thr Gly Leu Thr Ala Gln Asp Met
      275          280          285
His Tyr Ala Gln Cys Leu Ser Pro Val Asp Trp Asp Lys Pro Asp Ser
      290          295          300
Ser Gly Thr Glu Gln Asp Asp Leu Phe Ser Phe
      305          310          315

```

<210> 3467

<211> 638

<212> DNA

<213> Homo sapiens

<400> 3467

```

acgcgtgaag ggcacggagg tattcattgt attattcttt caacctttat gaatgtatca
60
acatttgcaa aataaaaaag ttgtggagga ggaagaaaaa caaaaaccag gatgcactga
120
ggctctgaggt gaaggctcta ggagcatcag ttctctgttg ggatcaaggt tgctgggaca
180

```

gagcttgatc cctgtcaact gctaaaacaa tccaggacaa tccaatagta gagctgaatt
 240
 ttgattacct tggtcctgag cttcacagcc ctttggcaga ggaaatcctg tgacactgag
 300
 gtgtaaccac aagactggcc caaactgacc ctattctgtt ggtaacagga ggtatagcag
 360
 agccaaaact gaaagtcatg taaccocggac atgcacaaag gaggaaaatc ataactcgga
 420
 accaacgttt cctccctgtg gagccaagaa gacagggaca tgaccggagc ttgaggggag
 480
 gaacgctttc agaagggag ggtccattat cctggaagat ctggtgctga aacctgccat
 540
 tccacacctt accataaatg gccaaagtta aagccctcct attgaaacct gcccgcacg
 600
 acttctgtgt gccaacctgt cctccctaac ccgtcgac
 638

<210> 3468

<211> 88

<212> PRT

<213> Homo sapiens

<400> 3468

Met	Ser	Leu	Ser	Ser	Trp	Leu	His	Arg	Glu	Glu	Thr	Leu	Val	Pro	Ser
1				5					10					15	
Tyr	Asp	Phe	Pro	Pro	Leu	Cys	Met	Ser	Gly	Leu	His	Asp	Phe	Gln	Phe
			20					25					30		
Trp	Leu	Cys	Tyr	Thr	Ser	Cys	Tyr	Gln	Gln	Asn	Arg	Val	Ser	Leu	Gly
		35				40						45			
Gln	Ser	Cys	Gly	Tyr	Thr	Ser	Val	Ser	Gln	Asp	Phe	Leu	Cys	Gln	Arg
	50					55					60				
Ala	Val	Lys	Leu	Arg	Thr	Lys	Val	Ile	Lys	Ile	Gln	Leu	Tyr	Tyr	Trp
65					70				75					80	
Ile	Val	Leu	Asp	Cys	Phe	Ser	Ser								
				85											

<210> 3469

<211> 1710

<212> DNA

<213> Homo sapiens

<400> 3469

gccgcggctc cggggaacgg ccgcgcacgc gcgccccggc tgcttctgct ctttctgggt
 60
 ccgctgctgt gggccccggc tgcggtccgg gcgggccag atgaagacct tagccaccgg
 120
 aacaaagaac cgcgggcgcc ggcccagcag ctgcagccgc agcctgtggc tgtgcagggc
 180
 cccgagccgg cccgggtcga gaaaatattt acaccagcag ctccagttca taccaataaa
 240
 gaagatcctg ctacccaaac taatttggga tttatccatg catttgctgc tgccatatca
 300
 gttattattg tatctgaatt gggtgataag acatttttta tagcagccat catggcaatg
 360

cgtataacc gcctgaccgt gctggctggt gcaatgcttg ccttgggact aatgacatgc
420
ttgtcagttt tgtttggeta tgccaccaca gtcacccca ggtctatac atactatggt
480
tcaactgtat tatttgccat ttttggcatt agaatgcttc gggaaggctt aaagatgagc
540
cctgatgagg gtcaagagga actggaagaa gttcaagctg aattaaagaa gaaagatgaa
600
gaatttcaac gaaccaaact tttaaattgga ccgggagatg ttgaaacggg tacaagcata
660
acagtacctc agaaaaagtg gttgcatttt atttcaccca tttttgttca agctcttaca
720
ttaacattct tagcagaatg ggggtgatgc tctcaactaa ctacaattgt attggcagct
780
agagaggacc cctatggtgt agccgtgggt ggaactgtgg ggcactgcct gtgcacggga
840
ttggcagtaa ttggaggaag aatgatagca cagaaaatct ctgtcagaac tgtgacaatc
900
ataggaggca tegtgtttttt ggcgtttgca ttttctgcac tatttataag ccctgattct
960
ggtttttaac aagctgtttg ttcacttata tttagttaa aataggtagt attatctttc
1020
tgtacatagt gtacattaca actaaaagta atgggaaaca ctgtattttg tagcattgat
1080
ttgtaagttt gaccactta attattatgc ccaaagata taatcattga ttttatttgt
1140
aaagattttt aaaaaggttt gactcctaag tgtgggtttt tcttctctcc aacataatta
1200
tgttaatatg gtcctcattt ttcttttggt gcagaaccgt tgtgcagtgg ggtctacat
1260
gcaattttct ttcagcactg accccttttt aaggaataca aattttctcc ttcactctt
1320
agggtgttta agatgtttac cttaaagttt ttcttgggga aagaatgaat taatttctat
1380
ttcttaaaac atttccttga gccagtaaac agtagtttaa tcattggtct tttcaaaact
1440
agggtgttaa aaaaagagac atatatgata ttgctgttat atcaataaca tggcacaaca
1500
agaactgtct gccaggtcat tcttctctt ttttttttaa ttgggtagga caccatata
1560
aaaaacagtc aatatttgac aatgtggaat taccaaatta aaagagaata ctatgaatgt
1620
attcatattt tttctatatt gaataaacia tgtaacatag ataacaatat aaataaaagt
1680
ggtatgacca gtgaaaaaaaa aaaaaaaaaa
1710

<210> 3470

<211> 322

<212> PRT

<213> Homo sapiens

<400> 3470

Ala Ala Ala Pro Gly Asn Gly Arg Ala Ser Ala Pro Arg Leu Leu Leu

```

      1           5           10           15
Leu Phe Leu Val Pro Leu Leu Trp Ala Pro Ala Ala Val Arg Ala Gly
      20           25           30
Pro Asp Glu Asp Leu Ser His Arg Asn Lys Glu Pro Pro Ala Pro Ala
      35           40           45
Gln Gln Leu Gln Pro Gln Pro Val Ala Val Gln Gly Pro Glu Pro Ala
      50           55           60
Arg Val Glu Lys Ile Phe Thr Pro Ala Ala Pro Val His Thr Asn Lys
      65           70           75           80
Glu Asp Pro Ala Thr Gln Thr Asn Leu Gly Phe Ile His Ala Phe Val
      85           90           95
Ala Ala Ile Ser Val Ile Ile Val Ser Glu Leu Gly Asp Lys Thr Phe
      100          105          110
Phe Ile Ala Ala Ile Met Ala Met Arg Tyr Asn Arg Leu Thr Val Leu
      115          120          125
Ala Gly Ala Met Leu Ala Leu Gly Leu Met Thr Cys Leu Ser Val Leu
      130          135          140
Phe Gly Tyr Ala Thr Thr Val Ile Pro Arg Val Tyr Thr Tyr Tyr Val
      145          150          155          160
Ser Thr Val Leu Phe Ala Ile Phe Gly Ile Arg Met Leu Arg Glu Gly
      165          170          175
Leu Lys Met Ser Pro Asp Glu Gly Gln Glu Glu Leu Glu Glu Val Gln
      180          185          190
Ala Glu Leu Lys Lys Lys Asp Glu Glu Phe Gln Arg Thr Lys Leu Leu
      195          200          205
Asn Gly Pro Gly Asp Val Glu Thr Gly Thr Ser Ile Thr Val Pro Gln
      210          215          220
Lys Lys Trp Leu His Phe Ile Ser Pro Ile Phe Val Gln Ala Leu Thr
      225          230          235          240
Leu Thr Phe Leu Ala Glu Trp Gly Asp Arg Ser Gln Leu Thr Thr Ile
      245          250          255
Val Leu Ala Ala Arg Glu Asp Pro Tyr Gly Val Ala Val Gly Gly Thr
      260          265          270
Val Gly His Cys Leu Cys Thr Gly Leu Ala Val Ile Gly Gly Arg Met
      275          280          285
Ile Ala Gln Lys Ile Ser Val Arg Thr Val Thr Ile Ile Gly Gly Ile
      290          295          300
Val Phe Leu Ala Phe Ala Phe Ser Ala Leu Phe Ile Ser Pro Asp Ser
      305          310          315          320
Gly Phe

```

<210> 3471

<211> 2335

<212> DNA

<213> Homo sapiens

<400> 3471

```

ggccgcgtgg ccctggccga catgccttc accggcggcg gcaacatcgt ggtggccacg
60
gcggacggca gcagcgcgtc gcccgtcag ttctacaagg tgtgcgtgag cgtggtgagc
120
gagaagtgcc gtatcgacac ggagatcctg ccctccctgt tcatgcgctg caccaccgac
180

```


ctcaaccgca aggacaagtt ccccgccatc acccacctca agttcctggc ccgggacatg
240
tcggagcagg tgcttttgtg cgcgtccagc cagaccagca gcatcgtgga gtgctggtcc
300
ctgcgcaagg agggactccc cgtgaacaac atcttccagc agatctcccc cgtggttggc
360
gacaaacagc ccacaattct caaatggcgg atcctatcgg ccaccaacga tctggaccgt
420
gtgtcggccg tggcgctgcc caagctgcc atctcgtcga ccaacaccga cctcaagggtg
480
gccagcgaca cacagttcta ccctggcctc gggctggccc tggccttcca cgacggcagc
540
gtccacatcg tgcaccggct ctactgcag accatggccg tcttctacag ctccgcggcc
600
ccgaggcctg tggatgagcc ggccatgaag cggccccgca ccgcgggccc cgccgtccac
660
ttaaaggcta tgcagctatc gtggacgtca ctggccctgg tggggattga cagccacggg
720
aagctgagcg tgctccgcct ctacacctcc atgggcccacc cgctggagggt ggggctggcg
780
ctgcggcacc tgctcttctt gctggagtac tgcattggtga ccggctacga ctggtgggac
840
atcctgctgc acgtgcagcc cagtatggta cagagcctgg tggagaagct gcacgaggag
900
tacacgcgcc agaccgctgc cctgcagcag gtctcttcca cccggatcct ggccatgaag
960
gcctcgtctt gcaagctgtc gccctgcacg gtgacccgcg tgtgcgacta ccacaccaag
1020
ctcttcttca tgcctatcag ctccacctg aagtcgctgc tgcgccccca ctttctcaac
1080
acgcctgaca agagccccgg cgaccggctg accgagatct gcaccaagat caccgacgtc
1140
gacattgaca aggtcatgat caacctcaag acggaggaat ttgtgctgga catgaacaca
1200
ctgcaggcgc tgcagcagct cttgcagtgg gtgggcgact tcgtgctgta cctgctggcc
1260
agcctaccca accagggttc cctgctgagg ccgggccaca gctttctgcg ggacggcacc
1320
tcgctgggca tgcttcggga attgatggtg gtcattccga tctggggcct tctgaagccc
1380
agctgcctgc ccgtgtatac ggccacctcg gataccagc acagcatgtc cctgctcttc
1440
cgctgctca ccaagctctg gatctgctgt cgcgatgagg gccagcgag cgagccggac
1500
gaggcgctgg tggatgaatg ctgcctgctg ccagccagc tgcttatccc cagcctggac
1560
tggtgccag ccagcgacgg cctgggttagc cgctgcagc ccaagcagcc ccttcgtctg
1620
cagtttggcc gggcgccac gctgcctggc agtgctgcca ccctgcagct cgacggcctc
1680
gccaggggccc caggccagcc caagatcgac cacctgcgga ggctgcacct tggcgcttgc
1740
cccacggagg aatgcaaggc ctgcaccagg tgcggctgtg tcaccatgct caagtcgccc
1800

aacagaacca cggcgggtgaa gcagtgggag cagcgctgga tcaagaactg cctgtgcggg
 1860
 gggctctggg ggcgggtgcc cctcagctac ccctgagccc agctgcccct cagctactcc
 1920
 tcagctaccc ctcagctgcc cctgagcccc gctgctgcaa gagccaccgc tcgccctgga
 1980
 ctctcctcgg cgcgggttaac ctcagccccg cctgcagggc tgttgaaggc cgtgggcccgg
 2040
 acgctgcgt gaccagcaga gcttctgagg aagcccctgc ccttgtccag ctgggcccgc
 2100
 agtcacaca ccactctccc aggaccccca gatccctgga ccactctcat ccagaggacc
 2160
 gtccgtgacg gccgggggtc caggcggacc ttgtggtgac ccggctcggg cgtctcctcg
 2220
 gtttccttgc ctcacccgag gagagcgctg aacctggaca agcagcggct gggaaggaca
 2280
 ggtccaataa acgcccctcg cgcccaggaa aaaaaaaaaa aaaaaaaaaa aaaaa
 2335

<210> 3472

<211> 631

<212> PRT

<213> Homo sapiens

<400> 3472

Gly	Arg	Val	Ala	Leu	Ala	Asp	Ile	Ala	Phe	Thr	Gly	Gly	Gly	Asn	Ile
1				5					10					15	
Val	Val	Ala	Thr	Ala	Asp	Gly	Ser	Ser	Ala	Ser	Pro	Val	Gln	Phe	Tyr
			20					25					30		
Lys	Val	Cys	Val	Ser	Val	Val	Ser	Glu	Lys	Cys	Arg	Ile	Asp	Thr	Glu
		35					40					45			
Ile	Leu	Pro	Ser	Leu	Phe	Met	Arg	Cys	Thr	Thr	Asp	Leu	Asn	Arg	Lys
	50					55					60				
Asp	Lys	Phe	Pro	Ala	Ile	Thr	His	Leu	Lys	Phe	Leu	Ala	Arg	Asp	Met
65					70					75				80	
Ser	Glu	Gln	Val	Leu	Leu	Cys	Ala	Ser	Ser	Gln	Thr	Ser	Ser	Ile	Val
				85					90					95	
Glu	Cys	Trp	Ser	Leu	Arg	Lys	Glu	Gly	Leu	Pro	Val	Asn	Asn	Ile	Phe
			100					105						110	
Gln	Gln	Ile	Ser	Pro	Val	Val	Gly	Asp	Lys	Gln	Pro	Thr	Ile	Leu	Lys
		115					120						125		
Trp	Arg	Ile	Leu	Ser	Ala	Thr	Asn	Asp	Leu	Asp	Arg	Val	Ser	Ala	Val
	130					135					140				
Ala	Leu	Pro	Lys	Leu	Pro	Ile	Ser	Leu	Thr	Asn	Thr	Asp	Leu	Lys	Val
145					150					155				160	
Ala	Ser	Asp	Thr	Gln	Phe	Tyr	Pro	Gly	Leu	Gly	Leu	Ala	Leu	Ala	Phe
				165					170					175	
His	Asp	Gly	Ser	Val	His	Ile	Val	His	Arg	Leu	Ser	Leu	Gln	Thr	Met
		180						185					190		
Ala	Val	Phe	Tyr	Ser	Ser	Ala	Ala	Pro	Arg	Pro	Val	Asp	Glu	Pro	Ala
		195					200					205			
Met	Lys	Arg	Pro	Arg	Thr	Ala	Gly	Pro	Ala	Val	His	Leu	Lys	Ala	Met
	210					215					220				
Gln	Leu	Ser	Trp	Thr	Ser	Leu	Ala	Leu	Val	Gly	Ile	Asp	Ser	His	Gly

225					230				235				240			
Lys	Leu	Ser	Val	Leu	Arg	Leu	Ser	Pro	Ser	Met	Gly	His	Pro	Leu	Glu	
				245				250				255				
Val	Gly	Leu	Ala	Leu	Arg	His	Leu	Leu	Phe	Leu	Leu	Glu	Tyr	Cys	Met	
				260				265				270				
Val	Thr	Gly	Tyr	Asp	Trp	Trp	Asp	Ile	Leu	Leu	His	Val	Gln	Pro	Ser	
				275				280				285				
Met	Val	Gln	Ser	Leu	Val	Glu	Lys	Leu	His	Glu	Glu	Tyr	Thr	Arg	Gln	
				290				295				300				
Thr	Ala	Ala	Leu	Gln	Gln	Val	Leu	Ser	Thr	Arg	Ile	Leu	Ala	Met	Lys	
305					310				315				320			
Ala	Ser	Leu	Cys	Lys	Leu	Ser	Pro	Cys	Thr	Val	Thr	Arg	Val	Cys	Asp	
				325				330				335				
Tyr	His	Thr	Lys	Leu	Phe	Leu	Ile	Ala	Ile	Ser	Ser	Thr	Leu	Lys	Ser	
				340				345				350				
Leu	Leu	Arg	Pro	His	Phe	Leu	Asn	Thr	Pro	Asp	Lys	Ser	Pro	Gly	Asp	
				355				360				365				
Arg	Leu	Thr	Glu	Ile	Cys	Thr	Lys	Ile	Thr	Asp	Val	Asp	Ile	Asp	Lys	
				370				375				380				
Val	Met	Ile	Asn	Leu	Lys	Thr	Glu	Glu	Phe	Val	Leu	Asp	Met	Asn	Thr	
385					390				395				400			
Leu	Gln	Ala	Leu	Gln	Gln	Leu	Leu	Gln	Trp	Val	Gly	Asp	Phe	Val	Leu	
				405				410				415				
Tyr	Leu	Leu	Ala	Ser	Leu	Pro	Asn	Gln	Gly	Ser	Leu	Leu	Arg	Pro	Gly	
				420				425				430				
His	Ser	Phe	Leu	Arg	Asp	Gly	Thr	Ser	Leu	Gly	Met	Leu	Arg	Glu	Leu	
				435				440				445				
Met	Val	Val	Ile	Arg	Ile	Trp	Gly	Leu	Leu	Lys	Pro	Ser	Cys	Leu	Pro	
				450				455				460				
Val	Tyr	Thr	Ala	Thr	Ser	Asp	Thr	Gln	Asp	Ser	Met	Ser	Leu	Leu	Phe	
465					470				475				480			
Arg	Leu	Leu	Thr	Lys	Leu	Trp	Ile	Cys	Cys	Arg	Asp	Glu	Gly	Pro	Ala	
				485				490				495				
Ser	Glu	Pro	Asp	Glu	Ala	Leu	Val	Asp	Glu	Cys	Cys	Leu	Leu	Pro	Ser	
				500				505				510				
Gln	Leu	Leu	Ile	Pro	Ser	Leu	Asp	Trp	Leu	Pro	Ala	Ser	Asp	Gly	Leu	
				515				520				525				
Val	Ser	Arg	Leu	Gln	Pro	Lys	Gln	Pro	Leu	Arg	Leu	Gln	Phe	Gly	Arg	
				530				535				540				
Ala	Pro	Thr	Leu	Pro	Gly	Ser	Ala	Ala	Thr	Leu	Gln	Leu	Asp	Gly	Leu	
545					550				555				560			
Ala	Arg	Ala	Pro	Gly	Gln	Pro	Lys	Ile	Asp	His	Leu	Arg	Arg	Leu	His	
				565				570				575				
Leu	Gly	Ala	Cys	Pro	Thr	Glu	Glu	Cys	Lys	Ala	Cys	Thr	Arg	Cys	Gly	
				580				585				590				
Cys	Val	Thr	Met	Leu	Lys	Ser	Pro	Asn	Arg	Thr	Thr	Ala	Val	Lys	Gln	
				595				600				605				
Trp	Glu	Gln	Arg	Trp	Ile	Lys	Asn	Cys	Leu	Cys	Gly	Gly	Leu	Trp	Trp	
				610				615				620				
Arg	Val	Pro	Leu	Ser	Tyr	Pro										
625					630											

<210> 3473

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 3473

taatgtgccc ccttagaagg acgtgtttct tggtttcaca cgtttgagtc tatgcaccag
60
ctggattttc acaaaggggt ctgaaccttg gctgttggcg agggcaaagt gggcgtggcg
120
gcgcatgcc cgggccggac tgagtgcgcg cgggcgagaa tggcgtacat ccagttggaa
180
ccattaaacg agggttttct ttctagaatc tctggtctgc tgctgtgcag atggacctgc
240
cggcactgct gtcagaagtg ctacgagtcc agctgttgcc agtcaagtga ggatgaagtt
300
gaaattctgg gacctttccc tgctcagacc cctccctggc tgatggccag ccggagcagt
360
gacaaggatg gtgactctgt ccacacggcc agcgaagtcc cgctgacccc acggaccaat
420
tccccggatg gaagacgctc gtctcagac acatccaagt ctacatacag cctgacgcgg
480
aggatttcga gtcttgagtc aagacgtccc agctctccac tcatcgatat taaaccatc
540
gagtttggcg ttctcagcgc caagaaggag cccatccaac cttcggtgct cagacggacc
600
tataaccccg acgactatct caggaagttc gaacccacc tgtactccct cgactccaac
660
agcgacgatg tggactctct gacagacgag gagatcctgt ccaagtacca gctgggcatg
720
ctgcacttca gcaactcagta cgacctgctg cacaaccacc tcaccgtgcg cgtgatcgag
780
gccagggacc tgccacctcc catctcccac gatggctcgc gccaggacat ggcgcactcc
840
aaccctacg tcaagatctg tctcctgcc aaccagaaga actcaaagca gaccggggtc
900
aaacgcaaga cccagaagcc cgtgtttgag gagcgctaca ccttcgagat ccccttcctg
960
gaggccaga ggaggacct gctcctgacc gtggtggatt ttgataagtt ctccgccac
1020
tgtgtcattg ggaaagtctc tgtgcctttg tgtgaagttg acctggtcaa gggcgggcac
1080
tgggtggaagg cgctgattcc cagttctcag aatgaagtgg agctggggga gctgcttctg
1140
tactgaatt atctcccaag tgctggcaga ctgaatgttg atgtcattcg agccaagcaa
1200
cttcttcaga cagatgtgag ccaaggttca gaccctttg tgaaaatcca gctggtgcat
1260
ggactcaaac ttgtgaaaac caagaagacg tccttcttaa ggggcacaaat tgatcctttc
1320
tacaatgaat ccttcagctt caaagttccc caagaagaac tggaaaatgc cagcctagtg
1380
tttacagttt tcggccacaa catgaagagc agcaatgact tcatcgggag gatcgtcatt
1440
ggccagtact cttcaggccc ctctgagacc aaccactgga ggcgcatgct caacacgcac
1500

cgcacagccg tggagcagtg gcatagcctg aggtcccgag ctgagtggtga ccgcgtgtct
 1560
 cctgcctccc tggaggtgac ctgagggctg caggggaaggc agctttcatt tgtttaaaaa
 1620
 aaaaaagacg gaaaaaaatg tgtcacatac tattacatcc
 1660

<210> 3474

<211> 474

<212> PRT

<213> Homo sapiens

<400> 3474

Met	Ala	Tyr	Ile	Gln	Leu	Glu	Pro	Leu	Asn	Glu	Gly	Phe	Leu	Ser	Arg
1				5					10					15	
Ile	Ser	Gly	Leu	Leu	Leu	Cys	Arg	Trp	Thr	Cys	Arg	His	Cys	Cys	Gln
			20					25					30		
Lys	Cys	Tyr	Glu	Ser	Ser	Cys	Cys	Gln	Ser	Ser	Glu	Asp	Glu	Val	Glu
			35				40					45			
Ile	Leu	Gly	Pro	Phe	Pro	Ala	Gln	Thr	Pro	Pro	Trp	Leu	Met	Ala	Ser
			50			55					60				
Arg	Ser	Ser	Asp	Lys	Asp	Gly	Asp	Ser	Val	His	Thr	Ala	Ser	Glu	Val
65					70					75				80	
Pro	Leu	Thr	Pro	Arg	Thr	Asn	Ser	Pro	Asp	Gly	Arg	Arg	Ser	Ser	Ser
				85					90					95	
Asp	Thr	Ser	Lys	Ser	Thr	Tyr	Ser	Leu	Thr	Arg	Arg	Ile	Ser	Ser	Leu
			100					105					110		
Glu	Ser	Arg	Arg	Pro	Ser	Ser	Pro	Leu	Ile	Asp	Ile	Lys	Pro	Ile	Glu
		115					120					125			
Phe	Gly	Val	Leu	Ser	Ala	Lys	Lys	Glu	Pro	Ile	Gln	Pro	Ser	Val	Leu
		130				135					140				
Arg	Arg	Thr	Tyr	Asn	Pro	Asp	Asp	Tyr	Phe	Arg	Lys	Phe	Glu	Pro	His
145					150					155					160
Leu	Tyr	Ser	Leu	Asp	Ser	Asn	Ser	Asp	Asp	Val	Asp	Ser	Leu	Thr	Asp
				165					170					175	
Glu	Glu	Ile	Leu	Ser	Lys	Tyr	Gln	Leu	Gly	Met	Leu	His	Phe	Ser	Thr
			180					185					190		
Gln	Tyr	Asp	Leu	Leu	His	Asn	His	Leu	Thr	Val	Arg	Val	Ile	Glu	Ala
		195					200					205			
Arg	Asp	Leu	Pro	Pro	Pro	Ile	Ser	His	Asp	Gly	Ser	Arg	Gln	Asp	Met
		210				215					220				
Ala	His	Ser	Asn	Pro	Tyr	Val	Lys	Ile	Cys	Leu	Leu	Pro	Asp	Gln	Lys
225					230					235					240
Asn	Ser	Lys	Gln	Thr	Gly	Val	Lys	Arg	Lys	Thr	Gln	Lys	Pro	Val	Phe
				245					250					255	
Glu	Glu	Arg	Tyr	Thr	Phe	Glu	Ile	Pro	Phe	Leu	Glu	Ala	Gln	Arg	Arg
			260					265					270		
Thr	Leu	Leu	Leu	Thr	Val	Val	Asp	Phe	Asp	Lys	Phe	Ser	Arg	His	Cys
		275					280					285			
Val	Ile	Gly	Lys	Val	Ser	Val	Pro	Leu	Cys	Glu	Val	Asp	Leu	Val	Lys
		290				295					300				
Gly	Gly	His	Trp	Trp	Lys	Ala	Leu	Ile	Pro	Ser	Ser	Gln	Asn	Glu	Val
305					310					315				320	
Glu	Leu	Gly	Glu	Leu	Leu	Leu	Ser	Leu	Asn	Tyr	Leu	Pro	Ser	Ala	Gly

325 330 335
 Arg Leu Asn Val Asp Val Ile Arg Ala Lys Gln Leu Leu Gln Thr Asp
 340 345 350
 Val Ser Gln Gly Ser Asp Pro Phe Val Lys Ile Gln Leu Val His Gly
 355 360 365
 Leu Lys Leu Val Lys Thr Lys Lys Thr Ser Phe Leu Arg Gly Thr Ile
 370 375 380
 Asp Pro Phe Tyr Asn Glu Ser Phe Ser Phe Lys Val Pro Gln Glu Glu
 385 390 395 400
 Leu Glu Asn Ala Ser Leu Val Phe Thr Val Phe Gly His Asn Met Lys
 405 410 415
 Ser Ser Asn Asp Phe Ile Gly Arg Ile Val Ile Gly Gln Tyr Ser Ser
 420 425 430
 Gly Pro Ser Glu Thr Asn His Trp Arg Arg Met Leu Asn Thr His Arg
 435 440 445
 Thr Ala Val Glu Gln Trp His Ser Leu Arg Ser Arg Ala Glu Cys Asp
 450 455 460
 Arg Val Ser Pro Ala Ser Leu Glu Val Thr
 465 470

<210> 3475

<211> 514

<212> DNA

<213> Homo sapiens

<400> 3475

acgcgtctgg agggctggtt cttctgcacg cccgcccga agctgctctg gctggtgctg
 60
 cagcccttct tctactcact acggccgctc tgcgtccacc ccaaggccgt gaccgcgatg
 120
 gaggtgctca acacgctggt gcagctggcg gcgacctgg ccatctttgc ctttggggg
 180
 ctcaagcccg tgggtctacct gctggccagc tccttctctg gcttgggctt gcaccccatc
 240
 tcggggccact tcgtggccga gcactacatg ttcttcaagg gccacgagac ctactcctac
 300
 tatgggcctc tcaactggat caccttcaat gtgggctacc acgtggagca ccacgacttc
 360
 cccagcatcc cgggctacaa cctgccgctg gtgcggaaga tcgcgcccga gtactacgac
 420
 cacctgccgc agcaccactc ctgggtgaag gtgctctggg attttgtgtt tgaggactcc
 480
 ctggggccct atgccagggt gaagcgggtg taca
 514

<210> 3476

<211> 171

<212> PRT

<213> Homo sapiens

<400> 3476

Thr Arg Leu Glu Gly Trp Phe Phe Cys Thr Pro Ala Arg Lys Leu Leu
 1 5 10 15
 Trp Leu Val Leu Gln Pro Phe Phe Tyr Ser Leu Arg Pro Leu Cys Val

```

                20                25                30
His Pro Lys Ala Val Thr Arg Met Glu Val Leu Asn Thr Leu Val Gln
      35                40                45
Leu Ala Ala Asp Leu Ala Ile Phe Ala Leu Trp Gly Leu Lys Pro Val
      50                55                60
Val Tyr Leu Leu Ala Ser Ser Phe Leu Gly Leu Gly Leu His Pro Ile
      65                70                75                80
Ser Gly His Phe Val Ala Glu His Tyr Met Phe Leu Lys Gly His Glu
      85                90                95
Thr Tyr Ser Tyr Tyr Gly Pro Leu Asn Trp Ile Thr Phe Asn Val Gly
      100                105                110
Tyr His Val Glu His His Asp Phe Pro Ser Ile Pro Gly Tyr Asn Leu
      115                120                125
Pro Leu Val Arg Lys Ile Ala Pro Glu Tyr Tyr Asp His Leu Pro Gln
      130                135                140
His His Ser Trp Val Lys Val Leu Trp Asp Phe Val Phe Glu Asp Ser
      145                150                155                160
Leu Gly Pro Tyr Ala Arg Val Lys Arg Val Tyr
                165                170

```

<210> 3477

<211> 356

<212> DNA

<213> Homo sapiens

<400> 3477

```

gcgcgctctg gctgcctgcc cggcggtctc cgggtcctcg tccagaccgg ccaccggagc
60
ttgacctcct gcatcgaccc ttccatggga cttaatgaag agcagaaaga atttcaaaaa
120
gtggcctttg actttgctgc ccgagagatg gctccaaata tggcagagtg ggaccagaag
180
gtaggcgttt ttcttgtgct tagacgttct aacaacagat gtctcaggca gacctttatc
240
tttgtctccc gataatgtaa ttgttaaag tctctccac ttaccaactc ttactgcaag
300
tgagaatacc ggtagtggat gatttttctt agaaggcatc ctgatcatct tgtaca
356

```

<210> 3478

<211> 116

<212> PRT

<213> Homo sapiens

<400> 3478

```

Met Ile Arg Met Pro Ser Arg Lys Asn His Pro Leu Pro Val Phe Ser
  1                5                10                15
Leu Ala Val Arg Val Gly Lys Trp Arg Arg His Leu Thr Ile Thr Leu
      20                25                30
Ser Gly Asp Lys Asp Lys Gly Leu Pro Glu Thr Ser Val Val Arg Thr
      35                40                45
Ser Lys His Lys Lys Asn Ala Tyr Leu Leu Val Pro Leu Cys His Ile
      50                55                60
Trp Ser His Leu Ser Gly Ser Lys Val Lys Gly His Phe Leu Lys Phe

```

```

65              70              75              80
Phe Leu Leu Phe Ile Lys Ser His Gly Arg Val Asp Ala Gly Gly Gln
              85              90              95
Ala Pro Val Ala Gly Leu Asp Glu Asp Pro Glu Thr Ala Gly Gln Ala
              100              105              110
Ala Glu Ala Arg
              115

```

<210> 3479

<211> 797

<212> DNA

<213> Homo sapiens

<400> 3479

```

nctttccaac ccagcctgaa ggggaaagcc acctcggagg acaccctcaa tctaaggaga
60
taccgccggt ctgacaggat catgctgcag aagtggcaga aaagggacat cagcaatttt
120
gagtatctca tgtacctcaa caccgcgggt gggagaacct gcaatgacta catgcagtac
180
ccagtgttcc cctgggtcct cgcagactac acctcagaga cattgaactt ggcaaatccg
240
aagattttcc gggatctttc aaagcccatg ggggctcaga ccaaggaaag gaagctgaaa
300
tttatccaga ggtttaaaga agttgagaaa actgaaggag acatgactgc ccagtgccac
360
tactacaccc actactcttc ggccatcatc gtggcctcct acctgggtccg gatgccaccc
420
ttcaccagg ccttctgcgc tctgcagggt agctgctgcc actctctgta cacacacaca
480
cacacacaca cacacacata cgctgtatc acaagactaa gacctgtgct tgaacaaaga
540
caggatgcct ctgctaaaaa cttagtcatt agccagtgat tcccagttga cattgggtcc
600
aggattctgg ctcaccagcc aaggcagggt gttcttcttc agttacacct gcacatctgc
660
ccaacaaagt cttgcaaaat gattctaaaa aataagaaat gagacatgaa aaaaatgatt
720
taacataaat aagatttagt ggaaaaagaa aaagcaggaa acttggagac tagaaaggca
780
ggcgggtcaag gattaga
797

```

<210> 3480

<211> 192

<212> PRT

<213> Homo sapiens

<400> 3480

```

Xaa Phe Gln Pro Ser Leu Lys Gly Lys Ala Thr Ser Glu Asp Thr Leu
  1              5              10              15
Asn Leu Arg Arg Tyr Pro Gly Ser Asp Arg Ile Met Leu Gln Lys Trp
              20              25              30
Gln Lys Arg Asp Ile Ser Asn Phe Glu Tyr Leu Met Tyr Leu Asn Thr

```


		35						40						45					
Ala	Ala	Gly	Arg	Thr	Cys	Asn	Asp	Tyr	Met	Gln	Tyr	Pro	Val	Phe	Pro				
	50					55					60								
Trp	Val	Leu	Ala	Asp	Tyr	Thr	Ser	Glu	Thr	Leu	Asn	Leu	Ala	Asn	Pro				
65					70					75					80				
Lys	Ile	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Met	Gly	Ala	Gln	Thr	Lys	Glu				
				85					90					95					
Arg	Lys	Leu	Lys	Phe	Ile	Gln	Arg	Phe	Lys	Glu	Val	Glu	Lys	Thr	Glu				
			100					105					110						
Gly	Asp	Met	Thr	Ala	Gln	Cys	His	Tyr	Tyr	Thr	His	Tyr	Ser	Ser	Ala				
		115					120					125							
Ile	Ile	Val	Ala	Ser	Tyr	Leu	Val	Arg	Met	Pro	Pro	Phe	Thr	Gln	Ala				
	130					135				140									
Phe	Cys	Ala	Leu	Gln	Val	Ser	Cys	Cys	His	Ser	Leu	Tyr	Thr	His	Thr				
145					150					155					160				
His	Thr	His	Thr	His	Thr	Tyr	Ala	Cys	Ile	Thr	Arg	Leu	Arg	Pro	Val				
				165					170					175					
Leu	Glu	Gln	Arg	Gln	Asp	Ala	Ser	Ala	Lys	Asn	Leu	Val	Ile	Ser	Gln				
			180					185					190						

```
<210> 3481
<211> 1794
<212> DNA
<213> Homo sapiens
```

```

<400> 3481
nncaacgtgg tcaccacctc acgaactata agaagcgtgt ggcagccttg gaagccacgc
60
aaaagcccag cacttcccag agccagggac tgacacaaca gaaagtctgc aagcaatgcc
120
atgaggtcct gaccagaggg tcttctgcc aatgcctcaa gtggtcacca cctcagctct
180
gcagaccctg cggtgctggg agccaccatg gagagtaggt gctacggctg cgctgtcaag
240
ttcaccctct tcaagaagga gtacggctgt aagaattgtg gcaggngctt ctgttcaggc
300
tgcctaagct tcagtgcagc agtgcctcgg actgggaaca cccaacagaa agtctgcaag
360
caatgccatg aggtcctgac cagaggggtct tctgccaatg cctccaagtg gtcaccacct
420
cagaactata agaagcgtgt ggcagccttg gaagccaagc aaaagcccag cacttcccag
480
agccagggac tgacacgaca agaccagatg attgctgagc gcctagcacg actccgccag
540
gagaacaagc ccaagttagt cccctcacag gcagagatag aggcacgggt ggctgccta
600
aaggatgaac gtcaggggtc catcccttcc acccaggaaa tggaggcacg acttgcagcg
660
ttgcagggca gaggttctacc ttctcaaacc cccagccccg gcacatcaca caccggacac
720
caggacccaa gcccagcaga cacaggatct gctaacgcag ctggcagctg aggtggctat
780
cgatgaaagc tggaaaggag gaggccagc tgctctcttc cagaatgatc tcaaccaggg
840

```

tggcccaggg agcactaatt ccaagaggca ggccacttgg ttcttgagga aggagaagag
 900
 cagactgctg gctgaggcag cacttgagtt gcgggaggag aacacgaggc aggaacggat
 960
 tctggccctg gccaaagcgac tagccatgct gcggggacag gaccccgaga gagtgaccct
 1020
 ccaggactat cgccctccag acagtgatga cgacgaggat gaggagacag ccatccaaag
 1080
 agtcctgcag cagctcactg aagaagcttc cctggatgag gcaagtggct ttaacatccc
 1140
 tgcagagcag gcttctcgac cctggacgca accccgcggg gcagagcctg agggccagga
 1200
 tgtggacccc aggccctgagg ctgaggaaga ggagctcccc tgggtgctgca tctgcaatga
 1260
 ggatgccacc ctacgctgcg ctggctgca tggggacctc ttctgtgccc gctgcttcg
 1320
 agagggccat gatgcctttg agcttaaaga gcaccagaca tctgcctact ctctccacg
 1380
 tgcaggccaa gagcactgaa gacaccctgg tcctcccga agggcagtc caccaggcagc
 1440
 ggcacccatt tctgggcccc gccacaggac gtccgatggg agagcttgctc tggctctact
 1500
 gatgatggat agggcccttc ctgagccttg gtgtccctgg aatgaggaaa gattctccat
 1560
 tgcagagaat gactgggagg gaagaagtcg gggccctcct attagaagcc cagactggaa
 1620
 gtgagaggca tgatggggag agaccagact gaatctacgg gtgagccctg taacctggct
 1680
 ctagggcaca ggcccctccc ctggcactta gtgggtctaa taaagtatgt tgattcattg
 1740
 ggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1794

<210> 3482

<211> 206

<212> PRT

<213> Homo sapiens

<400> 3482

Met	Pro	Pro	Ser	Gly	His	His	Leu	Ser	Ser	Ala	Asp	Pro	Ala	Val	Leu
1				5				10						15	
Gly	Ala	Thr	Met	Glu	Ser	Arg	Cys	Tyr	Gly	Cys	Ala	Val	Lys	Phe	Thr
			20					25					30		
Leu	Phe	Lys	Lys	Glu	Tyr	Gly	Cys	Lys	Asn	Cys	Gly	Arg	Xaa	Phe	Cys
		35					40					45			
Ser	Gly	Cys	Leu	Ser	Phe	Ser	Ala	Ala	Val	Pro	Arg	Thr	Gly	Asn	Thr
		50					55				60				
Gln	Gln	Lys	Val	Cys	Lys	Gln	Cys	His	Glu	Val	Leu	Thr	Arg	Gly	Ser
65					70					75				80	
Ser	Ala	Asn	Ala	Ser	Lys	Trp	Ser	Pro	Pro	Gln	Asn	Tyr	Lys	Lys	Arg
			85					90					95		
Val	Ala	Ala	Leu	Glu	Ala	Lys	Gln	Lys	Pro	Ser	Thr	Ser	Gln	Ser	Gln
			100					105					110		
Gly	Leu	Thr	Arg	Gln	Asp	Gln	Met	Ile	Ala	Glu	Arg	Leu	Ala	Arg	Leu

115	120	125
Arg Gln Glu Asn Lys Pro Lys Leu Val Pro Ser Gln Ala Glu Ile Glu		
130	135	140
Ala Arg Leu Ala Ala Leu Lys Asp Glu Arg Gln Gly Ser Ile Pro Ser		
145	150	155
Thr Gln Glu Met Glu Ala Arg Leu Ala Ala Leu Gln Gly Arg Val Leu		
165	170	175
Pro Ser Gln Thr Pro Gln Pro Gly Thr Ser His Thr Gly His Gln Asp		
180	185	190
Pro Ser Pro Ala Asp Thr Gly Ser Ala Asn Ala Ala Gly Ser		
195	200	205

<210> 3483

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3483

```

ncggccgcgg cgcggaacgg cgcctcccg cccaccatgg gcaacagcgc gagccgcaac
60
gacttcgagt gggctctacac cgaccagccg cacacgcagc ggcgcaagga gatactggcc
120
aagtaccggg ccatcaaggc cctgatgcgg ccagaccggc gcctcaagtg ggcggggctg
180
gtgctggtgc tgggtgcagat gctggcctgc tggctggtgc ggcgggctggc ctggcgctgg
240
ctgctgttct gggcctacgc ctttgggtggc tgcgtgaacc actcgctgac gctggccatc
300
cacgacatct cgcacaacgc ggccttcggc acggggccgtg cggcacgcaa ccgctggctg
360
gccgtgttcg ccaacctgcc cgtgggtgtg ccctacgccg cctccttcaa gaagtaccac
420
gtggaccacc accgctacct ggcgggcgac ggactggacg tggacgtgcc cacgcgt
477

```

<210> 3484

<211> 147

<212> PRT

<213> Homo sapiens

<400> 3484

Met Gly Asn Ser Ala Ser Arg Asn Asp Phe Glu Trp Val Tyr Thr Asp	
1	15
Gln Pro His Thr Gln Arg Arg Lys Glu Ile Leu Ala Lys Tyr Pro Ala	
20	30
Ile Lys Ala Leu Met Arg Pro Asp Pro Arg Leu Lys Trp Ala Gly Leu	
35	45
Val Leu Val Leu Val Gln Met Leu Ala Cys Trp Leu Val Arg Gly Leu	
50	60
Ala Trp Arg Trp Leu Leu Phe Trp Ala Tyr Ala Phe Gly Gly Cys Val	
65	80
Asn His Ser Leu Thr Leu Ala Ile His Asp Ile Ser His Asn Ala Ala	
85	95
Phe Gly Thr Gly Arg Ala Ala Arg Asn Arg Trp Leu Ala Val Phe Ala	

```

<400> 3486
Met Arg Val Pro Ser Ala Leu Val Thr Leu His Met Leu Leu Cys Ser
  1             5             10             15
Ile Pro Leu Ser Gly Arg Leu Asp Ser Asp Glu Gln Lys Ile Gln Asn
      20             25             30
Asp Ile Ile Asp Ile Leu Leu Thr Phe Thr Gln Gly Val Asn Glu Lys

```

[illegible]

<210> 3487

<211> 772

<212> DNA

<213> Homo sapiens

<400> 3487

```

nattgttattc aaaatcctag atttgaataa cttattattt taaataatca gtaactaaaa
60
ccaagcaatc catcacacaa agagggggaaa gggtaatat ctgagttata aattttttac
120
cctgtctgat aaaaatagaa gcctgaaagt ttaaattttt cctggattta aatttaaaga
180
taaatttggt tttcagtgaa atatcctcaa tagcaatttt accaaagagg ctttcttctg
240
aaggccacct ctgaaataat tagaggataa atgtcaatgg catgatatta agatattact
300
tggccaggcg tggtcgtcac gcgtgtaatc ccagcacttt gggaggccga ggcagggtgga
360
tcacgaggtc aagaaatcga gaccagcctg gctaacacag tgaaaccccg tctcattctg
420
agcttcttga caccttttaa tccagtcact gaaattagca tctgcaccta gaaagaaaaa
480
actgactata acatcactca tctgcacaac ctattaatca gcaaatactt actgaatacc
540
tactacatcc caggcagtggt tctaggcact ggggagtcgg cagcgaacaa aacctgtctt
600
aacagacctt atcaccaact ctactatagt tataaacata ccaatagttt aacatttagt
660
tgттаатсат гааасатттт гаттттттаа аааттттаас тасagtcaac cттаатттсa
720
сagatacaaa таатсtgсat тtcccccaat cccgctgctc ttagagaagc tt
772

```

<210> 3488

<211> 59

<212> PRT

<213> Homo sapiens

<400> 3488

Asp Ile Thr Trp Pro Gly Val Val Val Thr Arg Val Ile Pro Ala Leu
1 5 10 15
Trp Glu Ala Glu Ala Gly Gly Ser Arg Gly Gln Glu Ile Glu Thr Ser

	20		25		30
Leu	Ala	Asn	Thr	Val	Lys
					Pro
					Arg
					Leu
					Ile
					Leu
					Ser
					Phe
					Leu
					Thr
					Pro
	35		40		45
Phe	Asn	Pro	Val	Thr	Glu
					Ile
					Ser
					Ile
					Cys
					Thr
	50		55		

<210> 3489
 <211> 288
 <212> DNA
 <213> Homo sapiens

<400> 3489
 tagctaacac tccactatgg gagcccatct cctcccaggg ccagggagac cagggagacc
 60
 agggagacca ggtctggccc ccaactctaa ggctcatctt agaggcgaga ttcaggccca
 120
 gcccaggggtg ccccatgagg cctgggtggtt ggaggcagag ggtatccctt gcccaaattc
 180
 gtgccacatt cacagtcact gggaaagcta cggggatggg ccgggcgcgg tggctcacac
 240
 ctgtaatccc agcacttttg agagccccaa gacgacggat cacgagtc
 288

<210> 3490
 <211> 90
 <212> PRT
 <213> Homo sapiens

Met	Gly	Ala	His	Leu	Leu	Pro	Gly	Pro	Gly	Arg	Pro	Gly	Arg	Pro	Gly				
1				5				10				15							
Arg	Pro	Gly	Leu	Ala	Pro	Asn	Ser	Lys	Ala	His	Leu	Arg	Gly	Glu	Ile				
				20				25				30							
Gln	Ala	Gln	Pro	Arg	Val	Pro	His	Glu	Ala	Trp	Trp	Leu	Glu	Ala	Glu				
				35				40				45							
Gly	Ile	Pro	Cys	Pro	Asn	Ser	Cys	His	Ile	His	Ser	His	Trp	Glu	Ser				
				50			55				60								
Tyr	Gly	Asp	Gly	Pro	Gly	Ala	Val	Ala	His	Thr	Cys	Asn	Pro	Ser	Thr				
							70			75					80				
Leu	Glu	Ser	Pro	Lys	Thr	Thr	Asp	His	Glu										
				85				90											

<210> 3491
 <211> 568
 <212> DNA
 <213> Homo sapiens

<400> 3491
 gggaaccgac gtccctctgt ggtgaaattc cacccttca cgccgtgcat cgccgtagcc
 60
 gacaaggaca gcatctgctt ttgggactgg gagaaagggg agaagctgga ttatttccac
 120
 aatgggaacc ctcggtacac gagggtcact gccatggagt atctgaatgg ccaggactgc
 180

tcgcttctgc tgacggccac agacgatggg gccatcaggg tctggaagaa ttttgctgat
 240
 ttggaaaaga acccagagat ggtgaccgcg tggcaggggc tctcggacat gctgccaacg
 300
 acgcgaggag ctgggatggg ggtggactgg gagcaggaga ccggcctcct catgagctca
 360
 ggagacgtgc ggatcgtccg gatctgggac acagaccgtg agatgaagggt gcaggacatc
 420
 cctacgggcg cagacagctg tgtgacgagt ctgtcctgtg attcccaccg ctcactcatc
 480
 gtggctggcc tcggtgacgg ctccatccgc gtctacgaca gaaggatggc actcagcgaa
 540
 tgccgcgtca tgacgtaccg ggagcaca
 568

<210> 3492

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3492

Gly	Asn	Arg	Arg	Pro	Ser	Val	Val	Lys	Phe	His	Pro	Phe	Thr	Pro	Cys
1				5					10					15	
Ile	Ala	Val	Ala	Asp	Lys	Asp	Ser	Ile	Cys	Phe	Trp	Asp	Trp	Glu	Lys
			20					25					30		
Gly	Glu	Lys	Leu	Asp	Tyr	Phe	His	Asn	Gly	Asn	Pro	Arg	Tyr	Thr	Arg
		35					40					45			
Val	Thr	Ala	Met	Glu	Tyr	Leu	Asn	Gly	Gln	Asp	Cys	Ser	Leu	Leu	Leu
	50					55					60				
Thr	Ala	Thr	Asp	Asp	Gly	Ala	Ile	Arg	Val	Trp	Lys	Asn	Phe	Ala	Asp
65					70					75				80	
Leu	Glu	Lys	Asn	Pro	Glu	Met	Val	Thr	Ala	Trp	Gln	Gly	Leu	Ser	Asp
			85						90					95	
Met	Leu	Pro	Thr	Thr	Arg	Gly	Ala	Gly	Met	Val	Val	Asp	Trp	Glu	Gln
			100					105					110		
Glu	Thr	Gly	Leu	Leu	Met	Ser	Ser	Gly	Asp	Val	Arg	Ile	Val	Arg	Ile
		115					120					125			
Trp	Asp	Thr	Asp	Arg	Glu	Met	Lys	Val	Gln	Asp	Ile	Pro	Thr	Gly	Ala
	130					135					140				
Asp	Ser	Cys	Val	Thr	Ser	Leu	Ser	Cys	Asp	Ser	His	Arg	Ser	Leu	Ile
145					150					155				160	
Val	Ala	Gly	Leu	Gly	Asp	Gly	Ser	Ile	Arg	Val	Tyr	Asp	Arg	Arg	Met
			165					170						175	
Ala	Leu	Ser	Glu	Cys	Arg	Val	Met	Thr	Tyr	Arg	Glu	His			
			180					185							

<210> 3493

<211> 2244

<212> DNA

<213> Homo sapiens

<400> 3493

nggggggggat atccatgcag cgatcaggat gaaagaggtg attcaggaca accaagtaat
 60

aaggaactgt ttggagatga cagtgaggac gagggagctt cacatcatag tggtagtgat
120
aatcactctg aaagatcaga caatagatca gaagcttctg agcgttctga ccatgaggac
180
aatgacccct cagatgtaga tcagcacagt ggatcagaag cccctaata tgaatgaagac
240
gaaggtcata gatcggatgg agggagccat cattcagaag cagaaggttc tgaaaaagca
300
cattcagatg atgaaaaatg gggcagagaa gataaaagt accagtcaga tgaatgaaaag
360
atacaaaatt ctgatgatga ggagagggca caaggatctg atgaagataa gctgcagaat
420
tctgacgatg atgagaaaat gcagaacaca gatgatgagg agaggcctca gctttccgat
480
gatgagagac aacagctatc tgaggaggaa aaggctaatt ctgatgatga acggccggtg
540
gcttctgata atgatgatga gaaacagaat tctgatgatg aagaacaacc acagctgtct
600
gatgaagaga aaatgcaaaa ttctgatgat gaaaggccac aggccccaga tgaagaacac
660
aggcattcag atgatgaaga ggaacaggat cataaatcag aatccgcaag aggcagtgat
720
agtgaagatg aagttttacg aatgaaacgc aagaatgcga ttgcatctga ttcagaagcg
780
gatagtgaca ctgaggtgcc aaaagataat agtggaaacca tggatttatt tggaggtgca
840
gatgatattc cttcagggag tgatggagaa gacaaaccac ctactccagg acagcctgtt
900
gatgaaaatg gattgcctca ggatcaacag gaagaggagc caattcctga gaccagaata
960
gaagtagaaa tacccaaagt aaacactgat ttaggaaacg acttatattt tgttaaactg
1020
cccaactttc tcagtgtaga gccagacct tttgatcctc agtattatga agatgaattt
1080
gaagatgaag aaatgctgga tgaagaaggt agaaccagggt taaaattaaa ggtagaaaat
1140
actataagat ggaggatacg ccgagatgaa gaaggaaatg aaattaaaga aagcaatgct
1200
cggatagtca agtggtcaga tggaagcatg tccctgcatt taggcaatga agtgtttgat
1260
gtgtacaaag cccactgca gggcgaccac aatcatcttt ttataagaca aggtactggt
1320
ctacagggac aagcagtctt taaagcgaac ctcaccttca gacctcactc tacggacagt
1380
gccacacata gaaagatgac tctgtcactt gcagataggt gttcaaagac acagaagatt
1440
agaatcttgc caatggctgg tcgtgatcct gaatgccaac gcacagaaat gattaagaaa
1500
gaagaagaac gtttgagggc ttccatacgt agggaaatctc agcagcgccg aatgagagag
1560
aaacagcacc agcgggggct gagcgccagt tacctggaac ctgatcgata cgatgaggag
1620
gaggaaggcg aggagtccat cagcttggtt gccattaaaa accgatataa agggggcatt
1680

cgagaggaac gagccagaat ctattcatca gacagtgatg agggatcaga agaagataaa
 1740
 gctcaaagat tactcaaagc aaagaaactt accagtgatg aggaagggtga accttccgga
 1800
 aagagaaaag cagaagatga tgataaagca aataaaaagc ataagaagta tgtgatcagc
 1860
 gatgaagagg aagaagatga tgattgaagt atgaaatatg aaaacatttt atatatttta
 1920
 ttgtacagtt ataaatatgt aaacatgagt tatttttgatt gaaatgaatc gatttgcttt
 1980
 tgtgtaattt taattgtaat aaaacaattt aaaagcaagt ctctatgttt aagaaatcta
 2040
 cttttccggc caggcgcggt ggctcatgcc tgtaatccca gcacttcggg aggccgaggc
 2100
 aggtggatca caaggtcgtg gtggcgggtg cctgtagtcg cagctactcg ggaggctgag
 2160
 gcgggggaat tgggtgaacc caggaggcag aggttgcagt tagccgagat cgcgccactg
 2220
 cactccagcc tggcgacaga gcta
 2244

<210> 3494

<211> 628

<212> PRT

<213> Homo sapiens

<400> 3494

Xaa	Gly	Gly	Tyr	Pro	Cys	Ser	Asp	Gln	Asp	Glu	Arg	Gly	Asp	Ser	Gly	1	5	10	15
Gln	Pro	Ser	Asn	Lys	Glu	Leu	Phe	Gly	Asp	Asp	Ser	Glu	Asp	Glu	Gly	20	25	30	
Ala	Ser	His	His	Ser	Gly	Ser	Asp	Asn	His	Ser	Glu	Arg	Ser	Asp	Asn	35	40	45	
Arg	Ser	Glu	Ala	Ser	Glu	Arg	Ser	Asp	His	Glu	Asp	Asn	Asp	Pro	Ser	50	55	60	
Asp	Val	Asp	Gln	His	Ser	Gly	Ser	Glu	Ala	Pro	Asn	Asp	Asp	Glu	Asp	65	70	75	80
Glu	Gly	His	Arg	Ser	Asp	Gly	Gly	Ser	His	His	Ser	Glu	Ala	Glu	Gly	85	90	95	
Ser	Glu	Lys	Ala	His	Ser	Asp	Asp	Glu	Lys	Trp	Gly	Arg	Glu	Asp	Lys	100	105	110	
Ser	Asp	Gln	Ser	Asp	Asp	Glu	Lys	Ile	Gln	Asn	Ser	Asp	Asp	Glu	Glu	115	120	125	
Arg	Ala	Gln	Gly	Ser	Asp	Glu	Asp	Lys	Leu	Gln	Asn	Ser	Asp	Asp	Asp	130	135	140	
Glu	Lys	Met	Gln	Asn	Thr	Asp	Asp	Glu	Glu	Arg	Pro	Gln	Leu	Ser	Asp	145	150	155	160
Asp	Glu	Arg	Gln	Gln	Leu	Ser	Glu	Glu	Glu	Lys	Ala	Asn	Ser	Asp	Asp	165	170	175	
Glu	Arg	Pro	Val	Ala	Ser	Asp	Asn	Asp	Asp	Glu	Lys	Gln	Asn	Ser	Asp	180	185	190	
Asp	Glu	Glu	Gln	Pro	Gln	Leu	Ser	Asp	Glu	Glu	Lys	Met	Gln	Asn	Ser	195	200	205	
Asp	Asp	Glu	Arg	Pro	Gln	Ala	Pro	Asp	Glu	Glu	His	Arg	His	Ser	Asp				

210	215	220
Asp Glu Glu Glu Gln	Asp His Lys Ser Glu	Ser Ala Arg Gly Ser Asp
225	230	235
Ser Glu Asp Glu Val	Leu Arg Met Lys Arg	Lys Asn Ala Ile Ala Ser
245	250	255
Asp Ser Glu Ala Asp	Ser Asp Thr Glu Val	Pro Lys Asp Asn Ser Gly
260	265	270
Thr Met Asp Leu Phe	Gly Gly Ala Asp	Asp Ile Ser Ser Gly Ser Asp
275	280	285
Gly Glu Asp Lys Pro	Pro Thr Pro Gly Gln	Pro Val Asp Glu Asn Gly
290	295	300
Leu Pro Gln Asp Gln	Gln Glu Glu Glu Pro	Ile Pro Glu Thr Arg Ile
305	310	315
Glu Val Glu Ile Pro	Lys Val Asn Thr Asp	Leu Gly Asn Asp Leu Tyr
325	330	335
Phe Val Lys Leu Pro	Asn Phe Leu Ser Val	Glu Pro Arg Pro Phe Asp
340	345	350
Pro Gln Tyr Tyr Glu	Asp Glu Phe Glu Asp	Glu Glu Met Leu Asp Glu
355	360	365
Glu Gly Arg Thr Arg	Leu Lys Leu Lys Val	Glu Asn Thr Ile Arg Trp
370	375	380
Arg Ile Arg Arg Asp	Glu Glu Gly Asn Glu	Ile Lys Glu Ser Asn Ala
385	390	395
Arg Ile Val Lys Trp	Ser Asp Gly Ser Met	Ser Leu His Leu Gly Asn
405	410	415
Glu Val Phe Asp Val	Tyr Lys Ala Pro Leu	Gln Gly Asp His Asn His
420	425	430
Leu Phe Ile Arg Gln	Gly Thr Gly Leu Gln	Gly Gln Ala Val Phe Lys
435	440	445
Ala Lys Leu Thr Phe	Arg Pro His Ser Thr	Asp Ser Ala Thr His Arg
450	455	460
Lys Met Thr Leu Ser	Leu Ala Asp Arg Cys	Ser Lys Thr Gln Lys Ile
465	470	475
Arg Ile Leu Pro Met	Ala Gly Arg Asp Pro	Glu Cys Gln Arg Thr Glu
485	490	495
Met Ile Lys Lys Glu	Glu Glu Glu Arg Leu	Arg Ala Ser Ile Arg Arg Glu
500	505	510
Ser Gln Gln Arg Arg	Met Arg Glu Lys Gln	His Gln Arg Gly Leu Ser
515	520	525
Ala Ser Tyr Leu Glu	Pro Asp Arg Tyr Asp	Glu Glu Glu Gly Glu
530	535	540
Glu Ser Ile Ser Leu	Ala Ala Ile Lys Asn	Arg Tyr Lys Gly Gly Ile
545	550	555
Arg Glu Glu Arg Ala	Arg Ile Tyr Ser Ser	Asp Ser Asp Glu Gly Ser
565	570	575
Glu Glu Asp Lys Ala	Gln Arg Leu Leu Lys	Ala Lys Lys Leu Thr Ser
580	585	590
Asp Glu Glu Gly Glu	Pro Ser Gly Lys Arg	Lys Ala Glu Asp Asp Asp
595	600	605
Lys Ala Asn Lys Lys	His Lys Lys Tyr Val	Ile Ser Asp Glu Glu Glu
610	615	620
Glu Asp Asp Asp		
625		

<210> 3495
 <211> 1085
 <212> DNA
 <213> Homo sapiens

<400> 3495
 cggggggccag ggtgccggca ggggcgtccg gggcgctctg accggcctcg cccgcccccc
 60
 cgcagacaca agatggtgaa ggagaccag tactatgaca tcctgggcgt gaagcccagc
 120
 gcgtccccgg aggagatcaa gaaggcctat cggaagctgg cgctcaagta ccaccggac
 180
 aagaaccgg atgagggcga gaagtttaaa ctcatatccc aggcatatga agtgctttca
 240
 gatccaaaga aaagggatgt ttatgaccaa ggcggagagc aggcaattaa agaaggaggc
 300
 tcaggcagcc ccagcttctc ttcacccatg gacatctttg acatgttctt tgggtggtggt
 360
 ggacggatgg ctagagagag aagaggcaag aatgttgtac accagttatc tgtaactctt
 420
 gaagatctat ataatggagt cacgaagaaa ttggccctcc agaaaaatgt aatttgtgag
 480
 aaatgtgaag gtgttggtgg gaagaagga tcggtggaga agtgcccgct gtgcaagggg
 540
 cgggggatgc agatccacat ccagcagatc gggccgggca tggtagagca gatccagacc
 600
 gtgtgcatcg agtgcaaggg ccagggtgag cgcacaaacc ccaaggaccg ctgagagagc
 660
 tgcagcgggg ccaaggtgat ccgtgagaag aagattatcg aggtacatgt tgaaaaaggt
 720
 atgaaagatg ggcaaaagat actatttcat ggagaaggag atcaggagcc tgagctggag
 780
 cctggtgatg tcataattgt gcttgatcag aaggatcata gtgtctttca gagacgaggg
 840
 catgacttga tcatgaaaat gaaaattcag ctttctgaag ctctttgtgg cttcaagaag
 900
 acgataaaaa cattggacaa tcgaattctt gttattacat ccaaagcagg tgaggtgata
 960
 aagcacgggg acctgagatg cgtgcgcgat gaaggaatgc ccatctacaa agcaccctg
 1020
 gaaaaagga ttctgatcat acagttttta gtaatctttc ctganaaaca ctggctttct
 1080
 ctgga
 1085

<210> 3496
 <211> 337
 <212> PRT
 <213> Homo sapiens

<400> 3496
 Met Val Lys Glu Thr Gln Tyr Tyr Asp Ile Leu Gly Val Lys Pro Ser
 1 5 10 15
 Ala Ser Pro Glu Glu Ile Lys Lys Ala Tyr Arg Lys Leu Ala Leu Lys

20							25				30						
Tyr	His	Pro	Asp	Lys	Asn	Pro	Asp	Glu	Gly	Glu	Lys	Phe	Lys	Leu	Ile		
35							40				45						
Ser	Gln	Ala	Tyr	Glu	Val	Leu	Ser	Asp	Pro	Lys	Lys	Arg	Asp	Val	Tyr		
50							55				60						
Asp	Gln	Gly	Gly	Glu	Gln	Ala	Ile	Lys	Glu	Gly	Gly	Ser	Gly	Ser	Pro		
65	70					75				80							
Ser	Phe	Ser	Ser	Pro	Met	Asp	Ile	Phe	Asp	Met	Phe	Phe	Gly	Gly	Gly		
85							90				95						
Gly	Arg	Met	Ala	Arg	Glu	Arg	Arg	Gly	Lys	Asn	Val	Val	His	Gln	Leu		
100							105				110						
Ser	Val	Thr	Leu	Glu	Asp	Leu	Tyr	Asn	Gly	Val	Thr	Lys	Lys	Leu	Ala		
115							120				125						
Leu	Gln	Lys	Asn	Val	Ile	Cys	Glu	Lys	Cys	Glu	Gly	Val	Gly	Gly	Lys		
130							135				140						
Lys	Gly	Ser	Val	Glu	Lys	Cys	Pro	Leu	Cys	Lys	Gly	Arg	Gly	Met	Gln		
145	150					155				160							
Ile	His	Ile	Gln	Gln	Ile	Gly	Pro	Gly	Met	Val	Gln	Gln	Ile	Gln	Thr		
165							170				175						
Val	Cys	Ile	Glu	Cys	Lys	Gly	Gln	Gly	Glu	Arg	Ile	Asn	Pro	Lys	Asp		
180							185				190						
Arg	Cys	Glu	Ser	Cys	Ser	Gly	Ala	Lys	Val	Ile	Arg	Glu	Lys	Lys	Ile		
195							200				205						
Ile	Glu	Val	His	Val	Glu	Lys	Gly	Met	Lys	Asp	Gly	Gln	Lys	Ile	Leu		
210							215				220						
Phe	His	Gly	Glu	Gly	Asp	Gln	Glu	Pro	Glu	Leu	Glu	Pro	Gly	Asp	Val		
225	230					235				240							
Ile	Ile	Val	Leu	Asp	Gln	Lys	Asp	His	Ser	Val	Phe	Gln	Arg	Arg	Gly		
245							250				255						
His	Asp	Leu	Ile	Met	Lys	Met	Lys	Ile	Gln	Leu	Ser	Glu	Ala	Leu	Cys		
260							265				270						
Gly	Phe	Lys	Lys	Thr	Ile	Lys	Thr	Leu	Asp	Asn	Arg	Ile	Leu	Val	Ile		
275							280				285						
Thr	Ser	Lys	Ala	Gly	Glu	Val	Ile	Lys	His	Gly	Asp	Leu	Arg	Cys	Val		
290							295				300						
Arg	Asp	Glu	Gly	Met	Pro	Ile	Tyr	Lys	Ala	Pro	Leu	Glu	Lys	Gly	Ile		
305	310					315				320							
Leu	Ile	Ile	Gln	Phe	Leu	Val	Ile	Phe	Pro	Xaa	Lys	His	Trp	Leu	Ser		
325							330				335						
Leu																	

```
<210> 3497
<211> 1638
<212> DNA
<213> Homo sapiens
```

```
<400> 3497
nnaagttaaa aataaatttt caaaccttat catatttact ttaccaacaa tcttgattac
60
gtggcaactt tgttgctata attttatgca gcagataaaag gtagacgttc ctccccaaag
120
tttttagtat atccttctaa aaagttttcc tgagaatttt tagtttggcc tctcaagttt
180
```

ccttatttta ccttttctta aattacctcc ctcttctctt agtgaaatga gccttccttc
240
agcatagca acttatacctt attgcttttt tcatacccaa ttttttggtt tatctctttc
300
agccaactgg gtcctgaagt agctgaaatg cgaaaaaggc agcagtccca aaatgaagga
360
acacctgctg tgtctcaagc tcctggaaac cagaggccca acaacacctg ttgcttttgt
420
tggtgctgtt gttgcagctg ctctgcctc actgtgagga atgaagaaag aggggaaaat
480
gcgggaagac ccacacacac tacaaaaatg gagagtatcc aggtcctaga ggaatgccaa
540
aaccctactg cagaggaagt cttgtcctgg tctcaaaatt ttgacaagat gatgaaggcc
600
ccagcaggaa gaaacctttt cagagagttc ctccgaacag aatacagtga agagaacctt
660
ctttctggc ttgcttggtga agacttaaag aaggagcaga acaaaaaagt aattgaagaa
720
aaggctagga tgatatatga agattacatt tctatactat caccaaaaga ggtagctctt
780
gattctcgag ttagagaggt gatcaataga aatctgttgg atcccaatcc tcacatgtat
840aacttcagat atatacttta atgcacagag attcttttcc aaggtttttg 900
aactctcaaa tttataagtc atttgttgaa agtactgctg gctcttcttc tgaatcttaa
960
tgttcattta aaaacaatca ttttggaggg ctgagatggg aaataaaaagt agttaataa
1020
catcagaaac tgagttcctg gagaactaca gtttagcatt cctcaggcta ctgtgaaaac
1080
acaaccgtta tggcttttgt ctccattttt atcaagggtt tccatgggta agtttggaga
1140
aaataccaca caaaacaatg aattgccaaa ttgtttgttt tattcaagac tcattctact
1200
tgcaagcaaa gtgtatttgt agtcctatga acagtctcct cgtgtatctc cagagactgc
1260
atgtgcaaag taaaatgctt catttgccac atagttgttg taatatttaa tccagtagca
1320
taacttatat ctgtatttaa ggacttttgt gcaatatggg cttagaaat aattgccaaa
1380
aaaatcggcc atggtttgca ttttttaaca taatctaaga cagaaaaaaaa gcaattttta
1440
ctatgtaaca atggtattca acattctata tactgtgttt agtacactaa tttgaagcc
1500
aatatttctg tacatgaaaa agagctatct atctctgttt gttggaaaat cctaattggg
1560
attcctctgg ttgttactg ccaaaactgt ggcattttca ttacaggaga gtttactatg
1620
ctaaaagcaa aaaacaaa
1638

<210> 3498

<211> 210

<212> PRT

<213> Homo sapiens

<400> 3498

```

Met Arg Lys Arg Gln Gln Ser Gln Asn Glu Gly Thr Pro Ala Val Ser
 1           5           10           15
Gln Ala Pro Gly Asn Gln Arg Pro Asn Asn Thr Cys Cys Phe Cys Trp
          20           25           30
Cys Cys Cys Cys Ser Cys Ser Cys Leu Thr Val Arg Asn Glu Glu Arg
          35           40           45
Gly Glu Asn Ala Gly Arg Pro Thr His Thr Thr Lys Met Glu Ser Ile
          50           55           60
Gln Val Leu Glu Glu Cys Gln Asn Pro Thr Ala Glu Glu Val Leu Ser
65           70           75           80
Trp Ser Gln Asn Phe Asp Lys Met Met Lys Ala Pro Ala Gly Arg Asn
          85           90           95
Leu Phe Arg Glu Phe Leu Arg Thr Glu Tyr Ser Glu Glu Asn Leu Leu
          100          105          110
Phe Trp Leu Ala Cys Glu Asp Leu Lys Lys Glu Gln Asn Lys Lys Val
          115          120          125
Ile Glu Glu Lys Ala Arg Met Ile Tyr Glu Asp Tyr Ile Ser Ile Leu
          130          135          140
Ser Pro Lys Glu Val Ser Leu Asp Ser Arg Val Arg Glu Val Ile Asn
145          150          155          160
Arg Asn Leu Leu Asp Pro Asn Pro His Met Tyr Glu Asp Ala Gln Leu
          165          170          175
Gln Ile Tyr Thr Leu Met His Arg Asp Ser Phe Pro Arg Phe Leu Asn
          180          185          190
Ser Gln Ile Tyr Lys Ser Phe Val Glu Ser Thr Ala Gly Ser Ser Ser
          195          200          205
Glu Ser
          210

```

<210> 3499

<211> 732

<212> DNA

<213> Homo sapiens

<400> 3499

```

ntatggagca atccggtngt gtctgagcc ttggctgctc actcctccgg tcttggcgt
60
gtcctgattc gtcctcacag ccctgacctg gcagaagctt cactcctgcc cccagcccc
120
tgccacgggc ggcgtcccag cctggcacag aggtattgtg attcccaaa tggccaagnc
180
aacagactcn aacctcagga tngttctatt ttcgcccaga agcaataatt ttttttctc
240
tctggaaagc cctttcaaga tagtgatgtt gatgtggggg cacggcggtc gccgggtaca
300
tgaggtacc ggggtcacag cagcgcaagc accgggaagc agggagcccc tggctctgac
360
tgggcctgta tttttcatgt tgttcttcag ccctctcggc atggtccgga ggcgacggca
420
gtcctcagt cccctccac tctgctgtt cccctggac atggggcaca cgactcagga
480
ccaggccaga ggcaaaggca aggagcaggc agtacgccag caagagtccc tgtccacggg
540

```

agcccatctt cctgccgggc cctccgtccc gccggccgct cctcccgcgc cgcccctaga
 600
 gcatctcccg ccggccaagc ctctcccg ccanggtccg gggcgatgca cagactcggg
 660
 gaaggaaaca gagcagggga aaaggtcttc cggaggacgg cagtgcagaa gaggaggggtg
 720
 gggggcggta cg
 732

<210> 3500

<211> 168

<212> PRT

<213> Homo sapiens

<400> 3500

Phe	Phe	Phe	Pro	Ser	Gly	Lys	Pro	Phe	Gln	Asp	Ser	Asp	Val	Asp	Val
1				5					10					15	
Gly	Ala	Arg	Arg	Ser	Pro	Gly	Thr	Trp	Arg	Tyr	Arg	Gly	His	Ser	Ser
			20					25					30		
Ala	Ser	Thr	Gly	Lys	Gln	Gly	Ala	Pro	Gly	Pro	Asp	Trp	Ala	Cys	Ile
		35					40					45			
Phe	His	Val	Val	Leu	Gln	Pro	Ser	Arg	His	Gly	Pro	Glu	Ala	Thr	Ala
	50					55					60				
Ala	Pro	Gln	Ser	Pro	Pro	Thr	Pro	Ala	Val	Pro	Pro	Gly	His	Gly	Ala
65					70					75				80	
His	Asp	Ser	Gly	Pro	Gly	Gln	Arg	Gln	Arg	Gln	Gly	Ala	Gly	Ser	Thr
				85				90						95	
Pro	Ala	Arg	Val	Pro	Val	His	Gly	Ser	Pro	Ser	Ser	Cys	Arg	Ala	Leu
			100					105					110		
Arg	Pro	Ala	Gly	Arg	Ser	Ser	Arg	Ala	Ala	Pro	Arg	Ala	Ser	Pro	Ala
		115					120					125			
Gly	Gln	Ala	Ser	Ser	Arg	Pro	Xaa	Ser	Gly	Ala	Met	His	Arg	Leu	Gly
	130					135					140				
Glu	Gly	Asn	Arg	Ala	Gly	Glu	Lys	Val	Phe	Arg	Arg	Thr	Ala	Val	Gln
145					150					155					160
Lys	Arg	Arg	Val	Gly	Gly	Gly	Thr								
					165										

<210> 3501

<211> 691

<212> DNA

<213> Homo sapiens

<400> 3501

nnagtagcaa ccgccggaat ggcgaaagca acaacaatca aagaagcctt agcgagatgg
 60
 gaagagaaaa ctggccagag gccatctgaa gccaaagaga taaaacttta tgcccagatt
 120
 cccctatag agaagatgga tgcaccttg tccatgcttg ctaattgcga gaagctttca
 180
 ctgtctacaa actgcattga aaaaattgcc aacctgaatg gcttaaaaaa cttgaggata
 240
 ttatcttttag gaagaaacaa cataaagaac ttaaattggac tggaggcagt agggggacaca
 300

ttagaagaac tgtggatctc ctacaatttt attgagaagt tgaaagggat ccacataatg
 360
 aagaaattga agattctcta catgtctaataac aacctggtaa aagactgggc tgagtttgtg
 420
 aagctggcag aactgccatg cctcgaagac ctggtgtttg taggcaatcc cttggaagag
 480
 aaacattctg ctgagaataa ctggattgaa gaagcaacca agagagtgcc caaactgaaa
 540
 aagctggatg gtactccagt aattaaagg gatgaggaag aagacaacta atgccacgct
 600
 ttccactgtg tgttaactta tttaaatgtc ataagaacaa tagataaatt ttatataatt
 660
 gtctatttta aaaaaaaaaa aaaaaaaaaa a
 691

<210> 3502
 <211> 196
 <212> PRT
 <213> Homo sapiens

<400> 3502
 Xaa Val Ala Thr Ala Gly Met Ala Lys Ala Thr Thr Ile Lys Glu Ala
 1 5 10 15
 Leu Ala Arg Trp Glu Glu Lys Thr Gly Gln Arg Pro Ser Glu Ala Lys
 20 25 30
 Glu Ile Lys Leu Tyr Ala Gln Ile Pro Pro Ile Glu Lys Met Asp Ala
 35 40 45
 Ser Leu Ser Met Leu Ala Asn Cys Glu Lys Leu Ser Leu Ser Thr Asn
 50 55 60
 Cys Ile Glu Lys Ile Ala Asn Leu Asn Gly Leu Lys Asn Leu Arg Ile
 65 70 75 80
 Leu Ser Leu Gly Arg Asn Asn Ile Lys Asn Leu Asn Gly Leu Glu Ala
 85 90 95
 Val Gly Asp Thr Leu Glu Glu Leu Trp Ile Ser Tyr Asn Phe Ile Glu
 100 105 110
 Lys Leu Lys Gly Ile His Ile Met Lys Lys Leu Lys Ile Leu Tyr Met
 115 120 125
 Ser Asn Asn Leu Val Lys Asp Trp Ala Glu Phe Val Lys Leu Ala Glu
 130 135 140
 Leu Pro Cys Leu Glu Asp Leu Val Phe Val Gly Asn Pro Leu Glu Glu
 145 150 155 160
 Lys His Ser Ala Glu Asn Asn Trp Ile Glu Glu Ala Thr Lys Arg Val
 165 170 175
 Pro Lys Leu Lys Lys Leu Asp Gly Thr Pro Val Ile Lys Gly Asp Glu
 180 185 190
 Glu Glu Asp Asn
 195

<210> 3503
 <211> 857
 <212> DNA
 <213> Homo sapiens

<400> 3503

gcggcgccca ggtggagcgc gtcgggcccc tggatccggg gaaacggcca aggttgcggg
 60
 agtctcttca ctctcgtctc aaagccattt tgtgccgctg ccgctgcctc tacggccata
 120
 aatgcccaga gattagcggg gaagctccga gccagaaac ggggaacaaga cacaagaag
 180
 gagccggtgt ccacaaacgc tggtcagcgg agagtgaag aaatagtgcg gttcacacgg
 240
 cagctgcagc gagtccaccc caacgtgctt gctaaggcac tgacccgagg aattctccac
 300
 caggacaaga accttggtgt catcaataag ccctacgggc tccctgtgca tgggtggccct
 360
 ggggtccagc tctgcatcac tgatgtacta cctatcctgg caaagatgct tcatggccac
 420
 aaggcagagc ccttgcatct gtgccaccgg ctggacaagg aaaccacagg tgtaatggtg
 480
 ttggcttggg acaaggacat ggcacatcaa gtccaagagt tgtttagaac ccgtcaggtg
 540
 gtgaagaagt actgggcat cactgtgcat gtcccatgc cctcagcagg agtcgtggac
 600
 atccccattg tggagaagga ggggcaaggc cagcagcaac accccagaat gacattgtcc
 660
 ccgagctccc gcatggacga tgggaaaatg gtgaaagtgc ggcgcagccg gaatgcgcaa
 720
 gttgctgtaa ctcagtagca ggtgctcagc agcactctct cctccgccct cgtggagctc
 780
 cagcccatca ctggaataaa acatcagctt cgagttcact tgtcttttgg attggattgt
 840
 ccaatccttg gtgatca
 857

<210> 3504

<211> 285

<212> PRT

<213> Homo sapiens

<400> 3504

Ala	Ala	Pro	Arg	Trp	Ser	Ala	Ser	Gly	Pro	Trp	Ile	Arg	Gly	Asn	Gly
1				5					10					15	
Gln	Gly	Cys	Gly	Ser	Leu	Phe	Thr	Leu	Val	Ser	Lys	Pro	Phe	Cys	Ala
			20					25					30		
Ala	Ala	Ala	Ala	Ser	Thr	Ala	Ile	Asn	Ala	Gln	Arg	Leu	Ala	Glu	Lys
			35				40					45			
Leu	Arg	Ala	Gln	Lys	Arg	Glu	Gln	Asp	Thr	Lys	Lys	Glu	Pro	Val	Ser
	50				55						60				
Thr	Asn	Ala	Val	Gln	Arg	Arg	Val	Gln	Glu	Ile	Val	Arg	Phe	Thr	Arg
65				70					75					80	
Gln	Leu	Gln	Arg	Val	His	Pro	Asn	Val	Leu	Ala	Lys	Ala	Leu	Thr	Arg
			85				90						95		
Gly	Ile	Leu	His	Gln	Asp	Lys	Asn	Leu	Val	Val	Ile	Asn	Lys	Pro	Tyr
		100					105					110			
Gly	Leu	Pro	Val	His	Gly	Gly	Pro	Gly	Val	Gln	Leu	Cys	Ile	Thr	Asp
	115						120					125			
Val	Leu	Pro	Ile	Leu	Ala	Lys	Met	Leu	His	Gly	His	Lys	Ala	Glu	Pro

130		135		140	
Leu	His	Leu	Cys	His	Arg
145		150		155	160
Leu	Ala	Trp	Asp	Lys	Asp
		165		170	175
Thr	Arg	Gln	Val	Val	Lys
		180		185	190
Met	Pro	Ser	Ala	Gly	Val
		195		200	205
Gln	Gly	Gln	Gln	His	Pro
		210		215	220
Met	Asp	Asp	Gly	Lys	Met
225		230		235	240
Val	Ala	Val	Thr	Gln	Val
		245		250	255
Leu	Val	Glu	Leu	Gln	Pro
		260		265	270
His	Leu	Ser	Phe	Gly	Leu
		275		280	285

<210> 3505

<211> 1612

<212> DNA

<213> Homo sapiens

<400> 3505

gtgcacgagc tgcattctcag cgccctgcag aaggcccagg tggccctcat gacactgacg
 60
 ctcttccccg tccggctcct ggttgccgct gccatgatgc tgctggcctg gcccctcgca
 120
 cttgtcgcac ccttgggctc tgcggagaag gaacccgagc agcccccggc cctgtggagg
 180
 aagggttggtg acttcctgct gaaggccatc atgctgcacca tgtggttcgc cggcggttc
 240
 caccgggttg cctgaaggg gcggcaggcg ctgcccaccg aggcggccat cctcacgctc
 300
 ggcctcact cgtcctactt cgacgccatc cctgtgacca tgacgatgtc ctccatcgtg
 360
 atgaagacag agagcagaga catcccgatc tggggaactc tgatccagta tatacggcct
 420
 gtgttcgtgt cccggtcaga ccaggattct cgcaggaaaa cagtagaaga aatcaagaga
 480
 cgggcgcagt ccaacggaaa gtggccacag ataattgattt ttccagaagg aacttgtaca
 540
 aacaggacct gcctaattac cttcaaacct ggtgcattca tcctggagc gcccgctccac
 600
 cctgggggttt tacgatatcc aaataaactg gacaccatca catggacgtg gcaaggacct
 660
 ggagcgctgg aaatcctgtg gctcacgctg tgtcagtttc acaaccaagt ggaaatcgag
 720
 ttccttctctg tgtacagccc ttctgaggag gagaagagga accccgcgct gtatgccagc
 780
 aacgtgcggc gagtcatggc cgaggccttg ggtgtctccg tgactgacta cacgttcgag
 840

gactgccagc tggccctggc ggaaggacag ctccgtctcc ccgctgacac ttgcctttta
 900
 gaatttgcca ggctcgtgcg gggcctcggg ctaaaaccag aaaagcttga aaaagatctg
 960
 gacagatact cagaaagagc caggatgaag ggaggagaga agataggtat tgcggagttt
 1020
 gccgcctccc tggaagtccc cgtttctgac ttgctggaag acatgttttc actgttcgac
 1080
 gagagcggca gcggcgaggt ggacctgcca gagtgtgtgg ttgccctgtc tgcgtctgac
 1140
 tggccggccc ggaccctgga caccatccag ctggccttca agatgtacgg agcgcaagag
 1200
 gacggcagcg tcggcgaagg tgacctgtcc tgcacacctca agacggccct gggggtggca
 1260
 gagtcactg tgaccgacct attccgagcc attgaccaag aggagaaggg gaagatcaca
 1320
 ttccgtgact tccacaggtt tgcagaaatg taccctgcct tcgcagagga atacctgtac
 1380
 ccggatcaga cacatttcga aagctgtgca gagacctcac ctgcgccaat cccaaacggc
 1440
 ttctgtgccg atttcagccc ggaaaactca gacgctgggc ggaagcctgt tcgcaagaag
 1500
 ctggattagg acccaggggt gcggagagac gcggccctc ccgctgggac atcaccgcca
 1560
 tgagcctett tgcgagtac ctctgggctc cgctcctcac tctgtctgta ca
 1612

<210> 3506

<211> 502

<212> PRT

<213> Homo sapiens

<400> 3506

Val	His	Glu	Leu	His	Leu	Ser	Ala	Leu	Gln	Lys	Ala	Gln	Val	Ala	Leu
1				5					10					15	
Met	Thr	Leu	Thr	Leu	Phe	Pro	Val	Arg	Leu	Leu	Val	Ala	Ala	Ala	Met
				20				25					30		
Met	Leu	Leu	Ala	Trp	Pro	Leu	Ala	Leu	Val	Ala	Ser	Leu	Gly	Ser	Ala
				35			40					45			
Glu	Lys	Glu	Pro	Glu	Gln	Pro	Pro	Ala	Leu	Trp	Arg	Lys	Val	Val	Asp
				50		55					60				
Phe	Leu	Leu	Lys	Ala	Ile	Met	Arg	Thr	Met	Trp	Phe	Ala	Gly	Gly	Phe
65					70				75					80	
His	Arg	Val	Ala	Val	Lys	Gly	Arg	Gln	Ala	Leu	Pro	Thr	Glu	Ala	Ala
				85				90					95		
Ile	Leu	Thr	Leu	Ala	Pro	His	Ser	Ser	Tyr	Phe	Asp	Ala	Ile	Pro	Val
				100				105					110		
Thr	Met	Thr	Met	Ser	Ser	Ile	Val	Met	Lys	Thr	Glu	Ser	Arg	Asp	Ile
				115			120				125				
Pro	Ile	Trp	Gly	Thr	Leu	Ile	Gln	Tyr	Ile	Arg	Pro	Val	Phe	Val	Ser
				130		135					140				
Arg	Ser	Asp	Gln	Asp	Ser	Arg	Arg	Lys	Thr	Val	Glu	Glu	Ile	Lys	Arg
145					150				155					160	
Arg	Ala	Gln	Ser	Asn	Gly	Lys	Trp	Pro	Gln	Ile	Met	Ile	Phe	Pro	Glu

														165				170				175						
Gly	Thr	Cys	Thr	Asn	Arg	Thr	Cys	Leu	Ile	Thr	Phe	Lys	Pro	Gly	Ala													
				180				185				190																
Phe	Ile	Pro	Gly	Ala	Pro	Val	His	Pro	Gly	Val	Leu	Arg	Tyr	Pro	Asn													
				195			200					205																
Lys	Leu	Asp	Thr	Ile	Thr	Trp	Thr	Trp	Gln	Gly	Pro	Gly	Ala	Leu	Glu													
				210		215						220																
Ile	Leu	Trp	Leu	Thr	Leu	Cys	Gln	Phe	His	Asn	Gln	Val	Glu	Ile	Glu													
225					230					235				240														
Phe	Leu	Pro	Val	Tyr	Ser	Pro	Ser	Glu	Glu	Glu	Lys	Arg	Asn	Pro	Ala													
				245					250				255															
Leu	Tyr	Ala	Ser	Asn	Val	Arg	Arg	Val	Met	Ala	Glu	Ala	Leu	Gly	Val													
				260					265				270															
Ser	Val	Thr	Asp	Tyr	Thr	Phe	Glu	Asp	Cys	Gln	Leu	Ala	Leu	Ala	Glu													
				275					280				285															
Gly	Gln	Leu	Arg	Leu	Pro	Ala	Asp	Thr	Cys	Leu	Leu	Glu	Phe	Ala	Arg													
				290					295				300															
Leu	Val	Arg	Gly	Leu	Gly	Leu	Lys	Pro	Glu	Lys	Leu	Glu	Lys	Asp	Leu													
305					310					315				320														
Asp	Arg	Tyr	Ser	Glu	Arg	Ala	Arg	Met	Lys	Gly	Gly	Glu	Lys	Ile	Gly													
				325					330				335															
Ile	Ala	Glu	Phe	Ala	Ala	Ser	Leu	Glu	Val	Pro	Val	Ser	Asp	Leu	Leu													
				340					345				350															
Glu	Asp	Met	Phe	Ser	Leu	Phe	Asp	Glu	Ser	Gly	Ser	Gly	Glu	Val	Asp													
				355					360				365															
Leu	Arg	Glu	Cys	Val	Val	Ala	Leu	Ser	Val	Val	Cys	Trp	Pro	Ala	Arg													
				370					375				380															
Thr	Leu	Asp	Thr	Ile	Gln	Leu	Ala	Phe	Lys	Met	Tyr	Gly	Ala	Gln	Glu													
385					390					395				400														
Asp	Gly	Ser	Val	Gly	Glu	Gly	Asp	Leu	Ser	Cys	Ile	Leu	Lys	Thr	Ala													
				405					410				415															
Leu	Gly	Val	Ala	Glu	Leu	Thr	Val	Thr	Asp	Leu	Phe	Arg	Ala	Ile	Asp													
				420					425				430															
Gln	Glu	Glu	Lys	Gly	Lys	Ile	Thr	Phe	Ala	Asp	Phe	His	Arg	Phe	Ala													
				435					440				445															
Glu	Met	Tyr	Pro	Ala	Phe	Ala	Glu	Glu	Tyr	Leu	Tyr	Pro	Asp	Gln	Thr													
				450					455				460															
His	Phe	Glu	Ser	Cys	Ala	Glu	Thr	Ser	Pro	Ala																		

<210> 3507

<211> 885

<212> DNA

<213> Homo sapiens

<400> 3507

4000-5507
 nacgcgttga cgacgatgaa gatggcccca agtgtggaag tgggtgcctct gtccagaccc
 60

ccaggagagg cttccactc actcttgggg gctgtgtcca cacagggact ctgcagcagc

cgagcccgt ccccgccatc cgtgctcaag tcccactcgc ttagtcatt gttgatgctg
 180
 acctggggcca tggccccgag agccttcttc ctgcaaggtc tgtgggttct gccttacaac
 240
 cacatgcctc agggagctga gcaacaccca cctgtttggg gctgttagct taggactctt
 300
 ctcaacctgc tctttctccc tgatgggctg tgccagaggc ggttgctatg tgagggtggc
 360
 atcgctgtct acacctttgg cacctgcatt gccttcctaa tcatcattgg cgaccagcag
 420
 gacaagatta tagctgtgat ggcgaaagag ccggaggggg ccagcggccc ttggtacaca
 480
 gaccgcaagt tcaccatcag cctcactgcc ttctcttca tctgcccc ctccatcccc
 540
 agggagattg gtttccagaa atatgccagc ttcttgagcg tcgtgggtac ctggtacgct
 600
 acagccatcg ttatcatcaa gtacatctgg ccagataaag agatgacccc agggaacatc
 660
 ctgaccaggc cggttctctg gatggctgtg ttcaatgcca tgcccaccat ctgcttcgga
 720
 tttcagtgcc acgtcagcag tgtgcccgct ttcaacagca tgcagcagcc tgaagtgaag
 780
 acctgggggtg gagtgggtgac agctgccatg gtcatagccc tcgctgtcta catggggaca
 840
 ggcattctgtg gcttctcgac ctttgagct gctgtggatc ctgac
 885

<210> 3508

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3508

Leu	Arg	Thr	Leu	Leu	Asn	Leu	Leu	Phe	Leu	Pro	Asp	Gly	Leu	Cys	Gln
1			5					10					15		
Arg	Arg	Leu	Leu	Cys	Glu	Val	Ala	Ile	Ala	Val	Tyr	Thr	Phe	Gly	Thr
		20					25					30			
Cys	Ile	Ala	Phe	Leu	Ile	Ile	Ile	Gly	Asp	Gln	Gln	Asp	Lys	Ile	Ile
	35					40					45				
Ala	Val	Met	Ala	Lys	Glu	Pro	Glu	Gly	Ala	Ser	Gly	Pro	Trp	Tyr	Thr
	50					55					60				
Asp	Arg	Lys	Phe	Thr	Ile	Ser	Leu	Thr	Ala	Phe	Leu	Phe	Ile	Leu	Pro
65					70				75					80	
Leu	Ser	Ile	Pro	Arg	Glu	Ile	Gly	Phe	Gln	Lys	Tyr	Ala	Ser	Phe	Leu
			85				90						95		
Ser	Val	Val	Gly	Thr	Trp	Tyr	Val	Thr	Ala	Ile	Val	Ile	Ile	Lys	Tyr
		100					105					110			
Ile	Trp	Pro	Asp	Lys	Glu	Met	Thr	Pro	Gly	Asn	Ile	Leu	Thr	Arg	Pro
	115					120					125				
Ala	Ser	Trp	Met	Ala	Val	Phe	Asn	Ala	Met	Pro	Thr	Ile	Cys	Phe	Gly
	130					135					140				
Phe	Gln	Cys	His	Val	Ser	Ser	Val	Pro	Val	Phe	Asn	Ser	Met	Gln	Gln
145					150					155				160	
Pro	Glu	Val	Lys	Thr	Trp	Gly	Gly	Val	Val	Thr	Ala	Ala	Met	Val	Ile

		165				170				175
Ala	Leu	Ala	Val	Tyr	Met	Gly	Thr	Gly	Ile	Cys
		180				185				190
Gly	Ala	Ala	Val	Asp	Pro	Asp				
		195								

<210> 3509

<211> 331

<212> DNA

<213> Homo sapiens

<400> 3509

ctagtgcacc ggaccatggc ccagccaccc gtccacgact acgtgcctgt ctcttggact
60
gccctggtgc atgtcaaggc cgagtacttc cgctccctgg cccactacca cgtagccatg
120
gccctctgcg acggctcccc gaccgaggga gagctcccca cgcacgagca ggtcttcttg
180
agccccccac ctctttaag ccccccaggc cctgggttgc cccagaagtt ggaggagcgc
240
aggcagcttg gtaaggcgcc catgggtgga gtgccctggg gctcagatgg tcaccaacgg
300
tggcagggtg tccccacca ccctcacgcg t
331

<210> 3510

<211> 110

<212> PRT

<213> Homo sapiens

<400> 3510

Leu	Val	His	Arg	Thr	Met	Ala	Gln	Pro	Pro	Val	His	Asp	Tyr	Val	Pro
1			5					10						15	
Val	Ser	Trp	Thr	Ala	Leu	Val	His	Val	Lys	Ala	Glu	Tyr	Phe	Arg	Ser
			20					25						30	
Leu	Ala	His	Tyr	His	Val	Ala	Met	Ala	Leu	Cys	Asp	Gly	Ser	Pro	Thr
		35					40					45			
Glu	Gly	Glu	Leu	Pro	Thr	His	Glu	Gln	Val	Phe	Leu	Ser	Pro	Pro	Pro
	50					55				60					
Pro	Leu	Ser	Pro	Arg	Gly	Pro	Gly	Leu	Pro	Gln	Lys	Leu	Glu	Glu	Arg
65					70					75				80	
Arg	Gln	Leu	Gly	Lys	Ala	Pro	Met	Gly	Gly	Val	Pro	Trp	Gly	Ser	Asp
			85					90					95		
Gly	His	Gln	Arg	Trp	Gln	Gly	Val	Pro	His	His	Pro	His	Ala		
			100					105					110		

<210> 3511

<211> 3319

<212> DNA

<213> Homo sapiens

<400> 3511

nngcgcgcca ggggcgcctc atgtgagagc cgcgggacct gcagccgcgc ccgtccccga
60

agcacggggg ggtgtgtggg ggaagccgcc cccggcagca ggatgaaacg aggaggaaga
120
gatagtgacc gtaattcatc agaagaagga actgcagaga aatccaagaa actgaggact
180
acaaatgagc attctcagac ttgtgattgg ggtaatctcc ttcaggacat tattctccaa
240
gtattttaa atttgcctct tcttgaccgg gctcatgctt cacaagtttg ccgcaactgg
300
aaccaggat ttcacatgcc tgacttgtgg agatgttttg aatttgaact gaatcagcca
360
gctacatctt atttgaaagc taccatcca gagctgatca aacagattat taaaagacat
420
tcaaaccatc tacaatatgt cagcttcaag gtggacagca gcaaggaatc agctgaagca
480
gcttgtgata tactatcgca acttgtgaat tgctctttaa aaacacttgg acttatttca
540
actgctcgac caagctttat ggatttacca aagtctcact ttatctctgc actgacagtt
600
gtgttcgtaa actccaaatc cctgtcttcg cttaagatag atgatactcc agtagatgat
660
ccatctctca aagtactagt ggccaacaat agtgatacac tcaagctgtt gaaaatgagc
720
agctgtcctc atgtctctcc agcaggtatc ctttgtgtgg ctgatcagtg tcacggctta
780
agagaactag ccctgaacta ccacttattg agtgatgagt tgttacttgc attgtcttct
840
gaaaaacatg ttcgattaga acatttgcgc attgatgtag tcagtgagaa tcctggacag
900
acacacttcc atactattca gaagagtagc tgggatgctt tcatcagaca ttcacccaaa
960
gtgaacttag tgatgtatct ttttttatat gaagaagaat ttgacccctt ctttcgctat
1020
gaaatacctg ccacccatct gtactttggg agatcagtaa gcaaagatgt gcttggccgt
1080
gtgggaatga catgccctag actgggtgaa ctagtagtgt gtgcaaatgg attacggcca
1140
cttgatgaag agttaattcg cattgcagaa cgttgcaaaa atttgtcagc tattggacta
1200
ggggaatgtg aagtctcatg tagtgccctt gttgagtttg tgaagatgtg tgggtggccgc
1260
ctatctcaat tatccattat ggaagaagta ctaattcctg accaaaagta tagtttggag
1320
cagattcact gggaagtgtc caagcatctt ggtaggggtg ggtttcccgat catgatgccc
1380
acttggtaaa aactgcatga tgaatagcac cttaatttca agcaaatgta ttataattaa
1440
agttttatct gctgtagttc tgatataatt ctactatctt gtggcacaga aatttgatat
1500
cttcagtcag tatatgtaaa gattgtttat cggaagaccc atgaatgagt tttggtcaga
1560
aaattccact tgtttcccta gtgtaatagc agtcatactt ccgaattttt tttaatgtgg
1620
ttcggatgtg aaataaccag ttatacgtat taaacagttt acagtctaaa ggaaacaaaa
1680

cctatatgtt ataatatcca agaagtacta atagggtttc tgaaatgtta tattctctat
1740
gcattaaaaa aaaaatgtaa acttgacatt ttagggctct cagttacaca tacacctgtt
1800
ataagggtgt taatatagct caggaaagtg agcattttgt gagaaaaatg aatatatcat
1860
atctaattgga aaagattgga tgaatgttct caaatgttac aaagctgttt aaagaaaaag
1920
gtatatataa gtaatcagaa cacttagaag actgatagat gtcacacagt ggtattatag
1980
aaggataata cagagccaag atcaaattaa aagacaataa atggaacaga agggaggcag
2040
tgtttagctt tgtataaact tttagggttg ctctgtaatc tgctaaacca tatacattct
2100
tttgtgatat gttattatgt atgtggcact tgaggcactg tatgtaaagt aaggaatgct
2160
ttactagttc tccttgggtt tatctttgtt taaactagct tttaaagtatt aaacaataat
2220
tgaaatgaaa agcttaccta ttttaaaaag ccaaatttaa ataaatatag aactttaaaa
2280
tgtttatcag ttgtttccat gaaagaatat tagtttccag taaattttag tgatggctca
2340
ctcacttttc tattttggaa ttacatagtt atgtaagtaa aatttttaaa aatcataaag
2400
ggagcaccat tgtacagtct agcataaaca gcaaatttta aagaggacat atttaagtct
2460
ataatcatat ttttcagtaa atattgctca gtgaactgga aaactttaat agaaaaatgt
2520
ctgcagtttt gtgattgtta atttggttaa accgatattt tatattattt aagttaggta
2580
acattttata ttactttcat atgaataaaa gtaatccatg cattgtagag tctataaaat
2640
gttgagtttt tttagatgat ataaactttg attctgggca ctagtgctag tagatattac
2700
tacctcctg agggaaatca gaaatgattt aacccctagt gaatacatta attcttaaag
2760
cggctctttt cagtagtgtg acttttagaa agtgtctcag tagttaagga agctaacagt
2820
cttagatcta cttttaaaac ggatggcctt cttaagaata aagcaaaagg tgattttcta
2880
cataattttt gctttccaaa agtgatgata tgctctccta cagcaacata tgagaagaaa
2940
aaaggcttat ctagattcga aaattaacag caattatagt aatatatccc ctcttctaa
3000
atagtaaaaa gctctgattg tacaagaatt acctgtgcta gtcaagttgt tgtttttctt
3060
tgaacaactt tggaaaaatg gatttgacag tacataatca gttctactaa ccaaagcttg
3120
tatttggaat tttacttttt gtacaaattg aattatataa tgcttaaaat actttgtcac
3180
tttataagca aaatgcatag tacttaattt gtttatactg taaagtatat gttaaagtct
3240
tttatcactt tgagaataaaa aagttactaa tgcaaaaaaa aaaaaaaaaa aaaaaaaaaa
3300

aaaaaaaaaa aaaaaaaaaa

3319

<210> 3512

<211> 462

<212> PRT

<213> Homo sapiens

<400> 3512

```

Xaa Arg Ala Arg Gly Ala Ser Cys Glu Ser Arg Gly Thr Cys Ser Arg
 1           5           10           15
Arg Arg Pro Arg Ser Thr Gly Trp Cys Val Gly Glu Ala Ala Pro Gly
 20           25           30
Ser Arg Met Lys Arg Gly Gly Arg Asp Ser Asp Arg Asn Ser Ser Glu
 35           40           45
Glu Gly Thr Ala Glu Lys Ser Lys Lys Leu Arg Thr Thr Asn Glu His
 50           55           60
Ser Gln Thr Cys Asp Trp Gly Asn Leu Leu Gln Asp Ile Ile Leu Gln
 65           70           75           80
Val Phe Lys Tyr Leu Pro Leu Leu Asp Arg Ala His Ala Ser Gln Val
 85           90           95
Cys Arg Asn Trp Asn Gln Val Phe His Met Pro Asp Leu Trp Arg Cys
 100          105          110
Phe Glu Phe Glu Leu Asn Gln Pro Ala Thr Ser Tyr Leu Lys Ala Thr
 115          120          125
His Pro Glu Leu Ile Lys Gln Ile Ile Lys Arg His Ser Asn His Leu
 130          135          140
Gln Tyr Val Ser Phe Lys Val Asp Ser Ser Lys Glu Ser Ala Glu Ala
 145          150          155          160
Ala Cys Asp Ile Leu Ser Gln Leu Val Asn Cys Ser Leu Lys Thr Leu
 165          170          175
Gly Leu Ile Ser Thr Ala Arg Pro Ser Phe Met Asp Leu Pro Lys Ser
 180          185          190
His Phe Ile Ser Ala Leu Thr Val Val Phe Val Asn Ser Lys Ser Leu
 195          200          205
Ser Ser Leu Lys Ile Asp Asp Thr Pro Val Asp Asp Pro Ser Leu Lys
 210          215          220
Val Leu Val Ala Asn Asn Ser Asp Thr Leu Lys Leu Leu Lys Met Ser
 225          230          235          240
Ser Cys Pro His Val Ser Pro Ala Gly Ile Leu Cys Val Ala Asp Gln
 245          250          255
Cys His Gly Leu Arg Glu Leu Ala Leu Asn Tyr His Leu Leu Ser Asp
 260          265          270
Glu Leu Leu Leu Ala Leu Ser Ser Glu Lys His Val Arg Leu Glu His
 275          280          285
Leu Arg Ile Asp Val Val Ser Glu Asn Pro Gly Gln Thr His Phe His
 290          295          300
Thr Ile Gln Lys Ser Ser Trp Asp Ala Phe Ile Arg His Ser Pro Lys
 305          310          315          320
Val Asn Leu Val Met Tyr Phe Phe Leu Tyr Glu Glu Glu Phe Asp Pro
 325          330          335
Phe Phe Arg Tyr Glu Ile Pro Ala Thr His Leu Tyr Phe Gly Arg Ser
 340          345          350
Val Ser Lys Asp Val Leu Gly Arg Val Gly Met Thr Cys Pro Arg Leu

```

355	360	365
Val Glu Leu Val Val Cys	Ala Asn Gly Leu Arg	Pro Leu Asp Glu Glu
370	375	380
Leu Ile Arg Ile Ala Glu	Arg Cys Lys Asn Leu	Ser Ala Ile Gly Leu
385	390	395
Gly Glu Cys Glu Val Ser	Cys Ser Ala Phe Val	Glu Phe Val Lys Met
405	410	415
Cys Gly Gly Arg Leu Ser	Gln Leu Ser Ile Met	Glu Glu Val Leu Ile
420	425	430
Pro Asp Gln Lys Tyr Ser	Leu Glu Gln Ile His	Trp Glu Val Ser Lys
435	440	445
His Leu Gly Arg Val Trp	Phe Pro Asp Met Met	Pro Thr Trp
450	455	460

<210> 3513

<211> 2103

<212> DNA

<213> Homo sapiens

<400> 3513

tgaacctagg ggaatgtagt ctcattggga cttccaggat ccaagcctga cataatctcc
 60
 cagctggagc gaggggaaga tccctgggtc ctggacagga agggggctaa gaagagccag
 120
 ggctgtgga gtgactactc agaatatgaa cccaaggag agagtcaaaa tacagacttg
 180
 agtccgaagc cattaatttc agagcaaaca gtgattcttg ggaaaacacc cttggggagg
 240
 attgatcaag aaaataatga aacaaagcaa agcttctgtt tgagtccgaa ctctgttgac
 300
 caccgtgaag ttcaggtctt aagccaaagc atgccactca ctccgcacca ggcagtgcct
 360
 agtggagaga ggccctacat gtgtgttgag tgtgggaagt gctttggccg gaggttccac
 420
 ctccttcagc atcagcgtat ccacactgga gagaagccct atgtgtgcag tgtatgtggg
 480
 aaggccttca gccagagctc agtccttagt aaacacagga gaattcacac aggtgagaag
 540
 ccctatgagt gtaatgagtg tggaaaagcc tttagagtga gctcagatct tgctcagcat
 600
 cacaagatac atacaggaga gaagcctcac gaatgtcttg agtgtcggaa agccttcact
 660
 caactctcac atctcattca gcaccagcgg atccacacgg gagaaaggcc atatgtgtgt
 720
 ccgttgtgtg ggaaagcctt caaccatagc actgttctgc ggagccacca gagggtagac
 780
 actggggaga agcctcacag gtgcaatgag tgtgggaaaa ccttcagtgt gaagaggaca
 840
 ctgctgcagc accagaggat ccacaccggg gagaagccct acacgtgcag cgagtgtggg
 900
 aaggccttca gcgaccgctc agtcctcatt cagcaccaca acgtgcacac cggggagaag
 960
 ccctatgagt gcagtgagtg tgggaagacc ttcagccacc gctccacact gatgaatcac
 1020

gagcggatcc acaccgagga aaagccctat gcatgctacg aatgtgggaa ggccttcggt
 1080
 cagcactcac acctgatcca gcaccagaga gtccacactg gggagaagcc ctatgtgtgt
 1140
 ggtgaatgtg ggcacgcctt cagtgcacgc cggctctctga tccagcatga gagaatccac
 1200
 acaggtgaaa agcccttcca gtgcacagaa tgtggcaaag ctntcagcct gaaagcaact
 1260
 ctgattgtgc acctgaggac ccacacgggc gagaagccat atgagtgcaa tagctgcggg
 1320
 aaggccttca gccagtactc agtgctcatc cagcaccagc ggatccacac aggcgagaag
 1380
 ccctatgagt gcggggagtg tgggcgtgcc ttcaaccagc atggccacct aatccagcac
 1440
 cagaaagtgc acagaaagtt gtgacccatg gctgacacaa gaatccattc tcacagaaac
 1500
 tgcattgtga accacaagca gccctcagcc caagagaagt ctctgttaac tctataggaa
 1560
 gcttttcttt ggcgattcag tgtcacaaaa taactccaga aagaagcact tagcgtgctg
 1620
 ttctgttga aaaacttcag agactacctg ttttattttc ctcaacatct tgaagttatg
 1680
 ttggagagta atcatacaat tgtagagaat tttggtaaaa aacagccata attctttaac
 1740
 attagtttat ttgaactaag ggaatttaag gcataagaac cattatccca ataaaatctt
 1800
 acattccaaa taaagttctt tttctaagaa cattacatgc ccttcctaaa tatcaattaa
 1860
 ccatacta atattgcactt aaaatttgaa agtcggacta ttttcagtat tctcttaaaa
 1920
 gactaaagta ttgtatggat aaagtgat ataaaagatat tttcatcaag catcatgtaa
 1980
 aatggttgga aatcctaagt gtgtggattt ccatacctaag tgtgtggagt cctgttttgt
 2040
 atgaaacaag gaaaaagctt atatattagt gagaaattac ataaaattta aaaaaaaaaa
 2100
 aaa
 2103

<210> 3514

<211> 484

<212> PRT

<213> Homo sapiens

<400> 3514

Gly	Asn	Val	Val	Ser	Leu	Gly	Leu	Pro	Gly	Ser	Lys	Pro	Asp	Ile	Ile
1				5					10					15	
Ser	Gln	Leu	Glu	Arg	Gly	Glu	Asp	Pro	Trp	Val	Leu	Asp	Arg	Lys	Gly
			20					25					30		
Ala	Lys	Lys	Ser	Gln	Gly	Leu	Trp	Ser	Asp	Tyr	Ser	Glu	Tyr	Glu	Pro
			35				40					45			
Lys	Gly	Glu	Ser	Gln	Asn	Thr	Asp	Leu	Ser	Pro	Lys	Pro	Leu	Ile	Ser
		50				55					60				
Glu	Gln	Thr	Val	Ile	Leu	Gly	Lys	Thr	Pro	Leu	Gly	Arg	Ile	Asp	Gln

65					70					75					80
Glu	Asn	Asn	Glu	Thr	Lys	Gln	Ser	Phe	Cys	Leu	Ser	Pro	Asn	Ser	Val
				85					90					95	
Asp	His	Arg	Glu	Val	Gln	Val	Leu	Ser	Gln	Ser	Met	Pro	Leu	Thr	Pro
			100					105					110		
His	Gln	Ala	Val	Pro	Ser	Gly	Glu	Arg	Pro	Tyr	Met	Cys	Val	Glu	Cys
		115					120					125			
Gly	Lys	Cys	Phe	Gly	Arg	Ser	Ser	His	Leu	Leu	Gln	His	Gln	Arg	Ile
	130					135					140				
His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Ser	Val	Cys	Gly	Lys	Ala	Phe
145					150					155					160
Ser	Gln	Ser	Ser	Val	Leu	Ser	Lys	His	Arg	Arg	Ile	His	Thr	Gly	Glu
				165					170					175	
Lys	Pro	Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Ala	Phe	Arg	Val	Ser	Ser
			180					185					190		
Asp	Leu	Ala	Gln	His	His	Lys	Ile	His	Thr	Gly	Glu	Lys	Pro	His	Glu
		195					200					205			
Cys	Leu	Glu	Cys	Arg	Lys	Ala	Phe	Thr	Gln	Leu	Ser	His	Leu	Ile	Gln
	210					215					220				
His	Gln	Arg	Ile	His	Thr	Gly	Glu	Arg	Pro	Tyr	Val	Cys	Pro	Leu	Cys
225					230					235				240	
Gly	Lys	Ala	Phe	Asn	His	Ser	Thr	Val	Leu	Arg	Ser	His	Gln	Arg	Val
			245					250					255		
His	Thr	Gly	Glu	Lys	Pro	His	Arg	Cys	Asn	Glu	Cys	Gly	Lys	Thr	Phe
		260						265				270			
Ser	Val	Lys	Arg	Thr	Leu	Leu	Gln	His	Gln	Arg	Ile	His	Thr	Gly	Glu
		275					280					285			
Lys	Pro	Tyr	Thr	Cys	Ser	Glu	Cys	Gly	Lys	Ala	Phe	Ser	Asp	Arg	Ser
		290				295				300					
Val	Leu	Ile	Gln	His	His	Asn	Val	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
305					310					315					320
Cys	Ser	Glu	Cys	Gly	Lys	Thr	Phe	Ser	His	Arg	Ser	Thr	Leu	Met	Asn
			325						330					335	
His	Glu	Arg	Ile	His	Thr	Glu	Glu	Lys	Pro	Tyr	Ala	Cys	Tyr	Glu	Cys
			340					345				350			
Gly	Lys	Ala	Phe	Val	Gln	His	Ser	His	Leu	Ile	Gln	His	Gln	Arg	Val
	355					360					365				
His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Gly	Glu	Cys	Gly	His	Ala	Phe
	370					375					380				
Ser	Ala	Arg	Arg	Ser	Leu	Ile	Gln	His	Glu	Arg	Ile	His	Thr	Gly	Glu
385					390					395					400
Lys	Pro	Phe	Gln	Cys	Thr	Glu	Cys	Gly	Lys	Ala	Xaa	Ser	Leu	Lys	Ala
			405					410						415	
Thr	Leu	Ile	Val	His	Leu	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
			420					425					430		
Cys	Asn	Ser	Cys	Gly	Lys	Ala	Phe	Ser	Gln	Tyr	Ser	Val	Leu	Ile	Gln
		435					440					445			
His	Gln	Arg	Ile	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Gly	Glu	Cys
	450					455					460				
Gly	Arg	Ala	Phe	Asn	Gln	His	Gly	His	Leu	Ile	Gln	His	Gln	Lys	Val
465					470				475					480	
His	Arg	Lys	Leu												

<210> 3515

<211> 5003

<212> DNA

<213> Homo sapiens

<400> 3515

caacaattgg atattacatc aaccaagctg aataaccagt gtgagttgct aagccaactt
60
aaaggaaatt tagaagaaga aaatcggcat ctactagatc aaattcagac attaatgcta
120
cagaacagaa cactttttgga gcagaatatg gaaagcaagg atctttttca tgttgaacaa
180
agacagtaca ttgataagtt aaatgaatta agacgtcaga aggagaaact agaagagaaa
240
attatggatc aatacaaatt ttatgaccca tctcctccta gaaggagagg caactggatt
300
actctaaaaa tgagaaaatt gataaagtct aagaaagata ttaatcggga acgccagaaa
360
tctctaacat taacaccac ccgctcagac tccagtgaag gatttcttca gctccctcat
420
caagacgtc aagatagttc ttcagtaggt tcaaactctt tagaagatgg ccagaccttg
480
gggaccaaga aaagcagcac catgaatgac ctggtgcagt ccatggctct agcaggacag
540
tggaacagga gtactgagaa tttggagggt cctgatgata tttcaacggg taaaaggaga
600
aaagaattgg gagctatggc cttctctact acagccatca acttttcaac tgtcaactct
660
tctgcaggct tcagatccaa gcagttggtt aataataaag atactacatc ctttgaagac
720
ataagtccac aaggtgtagt tgatgattct agtacgggat caagagttca tgcttcaaga
780
ccagccagcc ttgatagtgg cagaacatcc actagcaata gcaataataa tgcttcaacta
840
catgaagtca aagcaggtgc agttaataac caaagcaggc caciaagcca cagcagtgga
900
gaatttagcc tgcttcatga ccatgaggct tgggtccagca gtggtagcag tccaatccag
960
tacttgaaaa gacagaccag atcaagccca gtgctccagc acaaaatatc tgaaacactg
1020
gagagtcgac atcacaagat caaaactggt tcccctggaa gtgaagttgt tactctacaa
1080
cagtttttgg aagaaagcaa taagcttacc tcagtacaga taaagtcttc aagtcaagag
1140
aatcttttag atgaagtaat gaaaagtttg tctgtctctt ctgacttttt gggaaaagac
1200
aaaccagtta gctgtggtct ggccaggcca gtaagtggaa aaaccccagg ggacttctat
1260
gatagacgga caactaagcc tgagtttttg agacctgggc ctcgaaaaac tgaagatacc
1320
tacttcatta gttctgcggg aaacactaca ccaggcactc aaggaaaaat aaaattagta
1380
aaagaatctt ctctgtcacg acaatcaaaa gatagtaacc cttatgcaac tttacctcgt
1440

gcaagcagcg tgatctcaac tgccgaagga actacacgaa ggacaagcat ccatgatttt
1500
ttgaccaagg acagtagact gcctatatca gttgattcac caccagctgc tgctgacagc
1560
aacaccactg cagcatctaa tgtggacaaa gtacaagaaa gcagaaattc aaaaagcagg
1620
tctagggagc aacaaagctc ctaattctat taccactac atgacatgtg ggccaagtga
1680
gagaaaagtg tccttcagtt tctcagtatg aagcctttat ttctgaagta acaagacacc
1740
tagcaactat aggaatcatt tttaaaaatc tttaaggaga cttttaacag tccttcgtga
1800
atagagcagg caagaaatac aaaccttcat tccttgaatc aaggagcact actggattca
1860
actgccaaaa ttttttaaag gttttaggac ttactatacc ttgtactgtt aagatctact
1920
gaataaagga cgttctctca ctaaggacca ggtgttttaa ggttaagtgt ttaaagaagt
1980
actccaagaa caatctgctt ttttcatcat ttgttttatg aatttatcca tgtttgctta
2040
atgcttctgc taagtgttag ccaaaatcta gccatttata tttagttgtg taaacctaaa
2100
ttaaatgctg tagtattttg tggaatgtac tatatagcaa gatacagaga aaattgtttt
2160
ggcatgtcag agccttattt ggtagcaga ctgcatgtgt tgatactttt ttttcttaa
2220
agccaattat tttgatgcaa aagaaattca gtttataaga taaatctgaa aaatccataa
2280
tgaaatagga gttataaaaa atttatagtg atattaatct ttccatattt cccattaagc
2340
aacactaagc attcataagt taacccatgg taaagagtgt ttttctgaaa ctttttttta
2400
gtaagatggg ttttcagcaa atggcattcc caagataaag ctgttggtgt ttaactcatt
2460
tcttttcttt ggtattgggt tatgtatgcg tgtgcatttt ttaacttga gagctgactg
2520
ttgcttaaga agttttctta tggcaaaaat aatgtaaata agttactatg atctgcattt
2580
tgccagaaac tcatttataa ttaaggctat catttattaa tgattttttt ctcttttatg
2640
atattacatt aaagttgata actgttattg gtacttttga aatatttgta tgtatttggt
2700
acctttaaac atttgaaga agcacaaaaa aatagattta gttaaccagc ggaaacatca
2760
atttttttag tagttccaat tttatatcac agttttattt tcttatgaaa tcaaaaaatg
2820
cattgatact cattaatgca aattcattat ttaacatcaa tatcagagta atcttcaagg
2880
tctgaaatga gaaacatact gactttttta aattttaaca gtgtacttct taggctttca
2940
ttaccagctc tgaagaactt tttggaataa ttccatattc catagtgtgt ggtttatgag
3000
ttgtgggttt catcactaac ccagtaacca taagaaaagt ctctctctct ctctctctct
3060

ctttctctct cctctcttct ctctctcttt cgtaggccag tagcaatggt gtgttcacag
3120
tctaatttcc aaaagaccat caataaaaa gagagcatgt ttaaattgaa atggaactta
3180
gagaacttga gcttacttac gtacttcaat gccaccggtta acttaggttt taccaccaa
3240
tgctgttaac attaaatcat tttgaaaatc ttggatgaaa ggtgctatgt aaatggaaat
3300
acaaaggatt cttactaaca taaaaaata atgcacaaca gaaatatcta aaaccttttc
3360
cgtagacttt gaaacatctc tctctgtcat aactccctgg attcaagtag cacattggta
3420
ataggtatca gagcagtcta gagacaattg catgtcaaaa aatgtacatt cttttttagg
3480
tgataaaaag taaacataga aattatgtta tggctaaaata cagttagtgg gtaacttaga
3540
tttatattag ctagcatcta atttgcacaa ctagaacaca tcccagaaca attactgaaa
3600
agctgaaatt taatgggtgg tgatgtagcc caatgagggc gaatgacatt ccagcttgac
3660
ctctccagaa cactaatatc ctaaaatata gaacatgctg ggtaagtgc attagtgcct
3720
caagcagaaa atgctgaaaa caacgtgtaa agtactgaat ctgagtaggc tgaccctgag
3780
aagggacaat taaagagaca accaagggaa cacattgaga ctacaaaaat atgaataatc
3840
tcaattatat tcatcacact tttttcatat ctttcaaga aacgactaga cagtagtaac
3900
cacatgaata ttttactttc tccagtatac cttgagaagc aaactttgta ggaagccact
3960
cttctcccct aaacaacttc tgccaaacaa taataaagcc aactggaaac gaatcggagc
4020
cattttcatt ttcttaaccg gggcctgaca tgctttaaat tatctggctg tattctaaat
4080
caacacctaa cccctcaagg aaactgaaga atcaatatac agggtaatag ctttggtc
4140
gagctccaat aatgtgcttc agatctgtcc atgtggaaat gctttcatcc aaatttttaa
4200
attggtggtt accaaagagt tcacaaaaca ggtttgtatg tagcaccttt catgcaaggc
4260
atgcaaaaag cctattttta aatcactgtg catattatag agttgtagcc acctcacaat
4320
gaagtactac agcctgtgct gtcttaatgg tttatgtcag gaaatgaaaa agatactgta
4380
ccaaatctgg aattacaatg gggagtaata atgtatacta aatgactttt gtatttttaag
4440
ttactttttg tgagtgggtga atttttgtgt ttttcttttc agctacactt agtcctgaga
4500
tgtatttttt ctttaagtct tgaatgaata caaaaggagc ccattttata atataaacct
4560
tgatgtacat gttgagatat ttggacaatg aaaatgcctt aaaaggaatg catatggata
4620
aagttgcact tataacaccc ttcaacaaaa tctaatttta aattgtcttt ttcttttcta
4680

ttaagggttt tctttttcag tgtctaccat tgtacttata actgttatta aataccaaat
 4740
 caaataatat aaaagctgta acatttcctt taaaactaat gctaataagg gatttagagt
 4800
 tgaatggcaa aatgtttatt acttggcaat acctgatgtc agtcacaggc atccaactca
 4860
 tgacaagaga taccactgtt tgttttttaa aaaacatttt tcattttgtt tctccttcaa
 4920
 aaattaagtt ggactaacat tcacgtatca aactaatata aaaagaaata aaaccaagag
 4980
 gtgatttttg taaaaaaaaa aaa
 5003

<210> 3516

<211> 547

<212> PRT

<213> Homo sapiens

<400> 3516

Gln	Gln	Leu	Asp	Ile	Thr	Ser	Thr	Lys	Leu	Asn	Asn	Gln	Cys	Glu	Leu
1				5					10					15	
Leu	Ser	Gln	Leu	Lys	Gly	Asn	Leu	Glu	Glu	Glu	Asn	Arg	His	Leu	Leu
			20					25					30		
Asp	Gln	Ile	Gln	Thr	Leu	Met	Leu	Gln	Asn	Arg	Thr	Leu	Leu	Glu	Gln
		35					40					45			
Asn	Met	Glu	Ser	Lys	Asp	Leu	Phe	His	Val	Glu	Gln	Arg	Gln	Tyr	Ile
	50					55					60				
Asp	Lys	Leu	Asn	Glu	Leu	Arg	Arg	Gln	Lys	Glu	Lys	Leu	Glu	Glu	Lys
65					70					75				80	
Ile	Met	Asp	Gln	Tyr	Lys	Phe	Tyr	Asp	Pro	Ser	Pro	Pro	Arg	Arg	Arg
			85					90					95		
Gly	Asn	Trp	Ile	Thr	Leu	Lys	Met	Arg	Lys	Leu	Ile	Lys	Ser	Lys	Lys
		100						105					110		
Asp	Ile	Asn	Arg	Glu	Arg	Gln	Lys	Ser	Leu	Thr	Leu	Thr	Pro	Thr	Arg
	115					120						125			
Ser	Asp	Ser	Ser	Glu	Gly	Phe	Leu	Gln	Leu	Pro	His	Gln	Asp	Ser	Gln
	130					135					140				
Asp	Ser	Ser	Ser	Val	Gly	Ser	Asn	Ser	Leu	Glu	Asp	Gly	Gln	Thr	Leu
145				150						155				160	
Gly	Thr	Lys	Lys	Ser	Ser	Thr	Met	Asn	Asp	Leu	Val	Gln	Ser	Met	Val
			165					170					175		
Leu	Ala	Gly	Gln	Trp	Thr	Gly	Ser	Thr	Glu	Asn	Leu	Glu	Val	Pro	Asp
	180							185					190		
Asp	Ile	Ser	Thr	Gly	Lys	Arg	Arg	Lys	Glu	Leu	Gly	Ala	Met	Ala	Phe
	195					200						205			
Ser	Thr	Thr	Ala	Ile	Asn	Phe	Ser	Thr	Val	Asn	Ser	Ser	Ala	Gly	Phe
	210					215					220				
Arg	Ser	Lys	Gln	Leu	Val	Asn	Asn	Lys	Asp	Thr	Thr	Ser	Phe	Glu	Asp
225				230						235				240	
Ile	Ser	Pro	Gln	Gly	Val	Ser	Asp	Asp	Ser	Ser	Thr	Gly	Ser	Arg	Val
			245					250					255		
His	Ala	Ser	Arg	Pro	Ala	Ser	Leu	Asp	Ser	Gly	Arg	Thr	Ser	Thr	Ser
		260					265					270			
Asn	Ser	Asn	Asn	Asn	Ala	Ser	Leu	His	Glu	Val	Lys	Ala	Gly	Ala	Val

275	280	285
Asn Asn Gln Ser Arg Pro Gln Ser His Ser Ser Gly Glu Phe Ser Leu		
290	295	300
Leu His Asp His Glu Ala Trp Ser Ser Ser Gly Ser Ser Pro Ile Gln		
305	310	315
Tyr Leu Lys Arg Gln Thr Arg Ser Ser Pro Val Leu Gln His Lys Ile		
	325	330
Ser Glu Thr Leu Glu Ser Arg His His Lys Ile Lys Thr Gly Ser Pro		
	340	345
Gly Ser Glu Val Val Thr Leu Gln Gln Phe Leu Glu Glu Ser Asn Lys		
	355	360
Leu Thr Ser Val Gln Ile Lys Ser Ser Ser Gln Glu Asn Leu Leu Asp		
	370	375
Glu Val Met Lys Ser Leu Ser Val Ser Ser Asp Phe Leu Gly Lys Asp		
385	390	395
Lys Pro Val Ser Cys Gly Leu Ala Arg Ser Val Ser Gly Lys Thr Pro		
	405	410
Gly Asp Phe Tyr Asp Arg Arg Thr Thr Lys Pro Glu Phe Leu Arg Pro		
	420	425
Gly Pro Arg Lys Thr Glu Asp Thr Tyr Phe Ile Ser Ser Ala Gly Lys		
	435	440
Pro Thr Pro Gly Thr Gln Gly Lys Ile Lys Leu Val Lys Glu Ser Ser		
	450	455
Leu Ser Arg Gln Ser Lys Asp Ser Asn Pro Tyr Ala Thr Leu Pro Arg		
465	470	475
Ala Ser Ser Val Ile Ser Thr Ala Glu Gly Thr Thr Arg Arg Thr Ser		
	485	490
Ile His Asp Phe Leu Thr Lys Asp Ser Arg Leu Pro Ile Ser Val Asp		
	500	505
Ser Pro Pro Ala Ala Ala Asp Ser Asn Thr Thr Ala Ala Ser Asn Val		
	515	520
Asp Lys Val Gln Glu Ser Arg Asn Ser Lys Ser Arg Ser Arg Glu Gln		
	530	535
Gln Ser Ser		540
545		

<210> 3517

<211> 342

<212> DNA

<213> Homo sapiens

<400> 3517

acgcgtgtga tcgtccgtgc gtctagcctt tgcccacgca ggtatgaaca cccggagtgc
60

acctggcgagg aggacccctt tcaggctgct ttggcccgat cctgacttta gtgctggcgc
120

cctttgcttt ccatacgcta tagtggcctc ctttgcctt gcgggggaaa ccgaggccac
180

agccttgacg cgcattgcctg atgcgccgac ttcccgcccc ctgctcgtgc gggcctcact
240

gtctccttct gggctggggg cttgcgacac cgcctccgg ccgactcgct cgtgggggtgc
300

ctgttggcag tggtgggtc actcgtgctc tggtcaggga ga
342

<210> 3518

<211> 99

<212> PRT

<213> Homo sapiens

<400> 3518

```

Met Asn Thr Arg Ser Ala Pro Gly Gly Arg Thr Pro Phe Arg Leu Leu
 1           5           10           15
Trp Pro Asp Pro Asp Phe Ser Ala Gly Arg Leu Cys Phe Pro Ser Ala
          20          25          30
Ile Val Ala Ser Phe Val Leu Ala Gly Glu Thr Glu Ala Thr Ala Leu
          35          40          45
Gln Arg Met Pro Asp Arg Pro Thr Ser Arg Pro Leu Leu Val Arg Ala
          50          55          60
Ser Leu Ser Pro Ser Gly Leu Gly Ala Cys Asp Thr Ala Leu Arg Pro
65          70          75          80
Thr Arg Ser Trp Gly Ala Cys Trp Gln Trp Leu Gly His Ser Cys Ser
          85          90          95
Gly Gln Gly

```

<210> 3519

<211> 2207

<212> DNA

<213> Homo sapiens

<400> 3519

```

ccacagccca gccccgggc ccagccccct ggtggcaccc cggcagacgc cgggccaggc
60
cagggcagct cagaagaaaa accaaaactg ggggttggttg tgaacctgcc acctgcccag
120
ctgtcgtcca gcgatgagga gaccaggagg gagctggccc gaattggggtt ggtgccaccc
180
cctgaagagt ttgccaacgg ggtcctgctg gccacccacac tcgctggccc gggccctctg
240
cccaccacgg tgcccagccc ggctcaggga aagcccagca gtgagccacc ccctgcccct
300
gagtctgcag ccgactctgg ggtggaggag gctgacacac gcagctccag cgaccccccac
360
ctggagacca caagcaccat ctccacggtg tccagcatgt ccaccttgag ctcgagagac
420
ggggaactca ctgacacca cacctccttc gctgacggac acacttttct actcgagaag
480
ccaccagtgc ctcccaagcc caagctcaag tccccgctgg ggaagggggc ggtgaccttc
540
agggacccgc tgctgaagca gtcctcggac agcgagctca tggcccagca gcaccacgcc
600
gcctctgccg ggctggcctc tgccgccggg cctgcccgcc ctgctacct cttccagaga
660
aggtccaagc tatgggggga ccccgaggag agccgggggc tccctggggc tgaagacgac
720
aaaccaactg tgatcagtga gctcagctcc cgcctgcagc agctgaacaa ggacacgcgt
780

```

tccctggggg aggaaccagt tggtagcctg ggcagcctgc tggaccctgc caagaagtcg
840
cccacgcag cagctcggtc tcccctctcc tctttgggtc tgggggggtg gtatgtggat
900
gccacctctt gactcctgct tcttgctgcc tggaagacca acctagtggg ccccgtaactg
960
tcagccttgg aggacagagt tcacagcgta gcaacgtggt cagaacttaa ggactttgca
1020
ggctcttaca aggcctggcc attctacott ctttagttca ggattcaaaa gacaggtagg
1080
agcttgggaa actcatgagg cctctcctaa ggtcccgga tgctgcctcc agctcctgtc
1140
atcctgggga attgctctgg ggtcctctcc ccttttagcc ttttccaact ctacgcaaaa
1200
ctggaaagcc ctcttcccag cagtgcagtg ttgaaggtgc ccgtagaatg ggtgttataa
1260
tcagagttag cagcctggtc ctaggcctct gtacaggacc agaccctga ggctggggtc
1320
tctgaccca cacctgacca gcccctctct tccctctctg cttctccctc cgctcttctc
1380
tgcctcttgg tcttgatgaa aatcaaagcc attttaaaaa gtgcatagca cagtgcctgg
1440
cctgggtcgg gccctcaata aacatttctt aaatggatga aagaacaaag caaaatgcaa
1500
atgctgtgtt ttgtgatttg agatctaggg aggtggctta ggacaaaaac ccacagaagg
1560
acttactcag cgttcagact catcaggtgt cgatccccc a tggctgggct caggtgggct
1620
caggtctcgt cattggctct gtctctctct gtgaggcagc tgcagcagtt gcagggcagg
1680
gtcaggggat tctcagccg gaacctctgg cacttcccct tctctgagtt catcctccca
1740
cggtgctctt tagcattctg tcttgatcag ggtacggttc tcttagccct tggctctggc
1800
tttcaccagg acctgtttg ttttcttttc tcagatgtgg gatggggaag gacaagacca
1860
gcagccctga cccttacgtg atgtctgttc ttttactcag tagttcctgc aaaattctga
1920
tctctgattg ggttcattgt ggtcctctgc ttttccctga ctgatcactg gggctctggg
1980
acatagggct gtcacggcc aagcttgagt cctctgttct ccagggagcc agggggatgg
2040
gtccgcccac ctagcaagca ggtgctgaga ttgaggggag ggggctctcc agatggaagt
2100
ccagtgtgt cccttgagta agtagatgct ggacagcctg tagcaaccaa tgttctgtga
2160
cacggcccc actggcatca gcaactcact tccttgccgg tcattgg
2207

<210> 3520

<211> 303

<212> PRT

<213> Homo sapiens

<400> 3520

Pro Gln Pro Ser Pro Arg Ala Gln Pro Pro Gly Gly Thr Pro Ala Asp
 1 5 10 15
 Ala Gly Pro Gly Gln Gly Ser Ser Glu Glu Lys Pro Lys Leu Gly Leu
 20 25 30
 Val Val Asn Leu Pro Pro Ala Gln Leu Ser Ser Ser Asp Glu Glu Thr
 35 40 45
 Arg Glu Glu Leu Ala Arg Ile Gly Leu Val Pro Pro Glu Glu Phe
 50 55 60
 Ala Asn Gly Val Leu Leu Ala Thr Pro Leu Ala Gly Pro Gly Pro Ser
 65 70 75 80
 Pro Thr Thr Val Pro Ser Pro Ala Ser Gly Lys Pro Ser Ser Glu Pro
 85 90 95
 Pro Pro Ala Pro Glu Ser Ala Ala Asp Ser Gly Val Glu Glu Ala Asp
 100 105 110
 Thr Arg Ser Ser Ser Asp Pro His Leu Glu Thr Thr Ser Thr Ile Ser
 115 120 125
 Thr Val Ser Ser Met Ser Thr Leu Ser Ser Glu Ser Gly Glu Leu Thr
 130 135 140
 Asp Thr His Thr Ser Phe Ala Asp Gly His Thr Phe Leu Leu Glu Lys
 145 150 155 160
 Pro Pro Val Pro Pro Lys Pro Lys Leu Lys Ser Pro Leu Gly Lys Gly
 165 170 175
 Pro Val Thr Phe Arg Asp Pro Leu Leu Lys Gln Ser Ser Asp Ser Glu
 180 185 190
 Leu Met Ala Gln Gln His His Ala Ala Ser Ala Gly Leu Ala Ser Ala
 195 200 205
 Ala Gly Pro Ala Arg Pro Arg Tyr Leu Phe Gln Arg Arg Ser Lys Leu
 210 215 220
 Trp Gly Asp Pro Val Glu Ser Arg Gly Leu Pro Gly Pro Glu Asp Asp
 225 230 235 240
 Lys Pro Thr Val Ile Ser Glu Leu Ser Ser Arg Leu Gln Gln Leu Asn
 245 250 255
 Lys Asp Thr Arg Ser Leu Gly Glu Glu Pro Val Gly Gly Leu Gly Ser
 260 265 270
 Leu Leu Asp Pro Ala Lys Lys Ser Pro Ile Ala Ala Ala Arg Ser Pro
 275 280 285
 Leu Ser Ser Leu Gly Leu Gly Gly Trp Tyr Val Asp Ala Thr Ser
 290 295 300

<210> 3521

<211> 638

<212> DNA

<213> Homo sapiens

<400> 3521

caacgtcaac aagcaccocgg gcggccggca gaaggcccgt atcctgcagg ccggcacgcc
 60
 gctggggctc atggcctacc tgtactccag tgatgccttc ctggaggggtt atgtgcagca
 120
 attcctctac accttccgct acttctgcac accccaacgac ttctctgact tectcctcga
 180
 ccgcatacaac agcacgctga ccaggggccca ccaggacccc acctcgacct tcaccaagat
 240

ctacaggcgg agcctctgcg tcctgcaggc ctgggtggag gactgctacg ctgtggactt
 300
 ccctcggaac agcgggctgc tggggaagct agaggacttc atctcctcca agatcctacc
 360
 cctggacggc tctgccaagc acctgctggg cctcctggag gtgggcatgg accggcgggc
 420
 cgagggcaac cctcgcgga cagacctgga gaacccagg gaggccgagg aggantgcca
 480
 gacccttcaa cgccctctgt aagaggctct cagaggacgg catctccagg aagagcttcc
 540
 cctggaggct gccccgaggc aacgggctgg tgctgccgcc acacaaggag cgccctaca
 600
 ccattgctgc cgccctgccc aagccctgct tcctcgag
 638

<210> 3522

<211> 181

<212> PRT

<213> Homo sapiens

<400> 3522

Cys	Leu	Pro	Gly	Gly	Leu	Cys	Ala	Ala	Ile	Pro	Leu	His	Leu	Pro	Leu
1				5					10					15	
Leu	Leu	His	Thr	Pro	Arg	Leu	Pro	Ala	Leu	Pro	Pro	Arg	Pro	His	Gln
			20					25					30		
Gln	His	Ala	Asp	Gln	Gly	Pro	Pro	Gly	Pro	His	Leu	Asp	Leu	His	Gln
		35				40						45			
Asp	Leu	Gln	Ala	Glu	Pro	Leu	Arg	Pro	Ala	Gly	Leu	Gly	Gly	Gly	Leu
		50				55					60				
Leu	Arg	Cys	Gly	Leu	Pro	Ser	Glu	Gln	Arg	Ala	Ala	Gly	Glu	Ala	Arg
65					70				75						80
Gly	Leu	His	Leu	Leu	Gln	Asp	Pro	Thr	Pro	Gly	Arg	Leu	Cys	Gln	Ala
			85					90						95	
Pro	Ala	Gly	Pro	Pro	Gly	Gly	Gly	His	Gly	Pro	Ala	Gly	Arg	Gly	Gln
		100				105							110		
Pro	Ser	Arg	His	Arg	Pro	Gly	Glu	Pro	Gln	Gly	Gly	Arg	Gly	Gly	Xaa
		115				120						125			
Pro	Asp	Pro	Ser	Thr	Pro	Ser	Val	Arg	Gly	Ser	Gln	Arg	Thr	Ala	Ser
		130				135					140				
Pro	Gly	Arg	Ala	Ser	Pro	Gly	Gly	Cys	Pro	Glu	Ala	Thr	Gly	Trp	Cys
145					150				155						160
Cys	Arg	His	Thr	Arg	Ser	Ala	Pro	Thr	Pro	Leu	Leu	Pro	Pro	Cys	Pro
			165					170						175	
Ser	Pro	Ala	Ser	Ser											
			180												

<210> 3523

<211> 2614

<212> DNA

<213> Homo sapiens

<400> 3523

nnactcctgg cagcccgagg cccccgagca cgcgcctgac agccctgct ggcccggcgc
 60

gcggcgctgc caggccagct catggccccc gacccgttgg ccgccgagac cgcggctcag
120
ggacttaccc cgcgctactt cacctgggac gaggtggccc agcgctcagg gtgcgaggag
180
cgggtggctag tgatcgaccg taaggtgtac aacatcagcg acttcagtcg ccggcatcca
240
gggggctccc gggtcacag ccactacgcc gggcaggatg ccacggatcc ctttgtggcc
300
ttccacatca acaagggcct tgtgaagaag tatatgaact ctctcctgat tggagaactg
360
tctccagagc agcccagctt tgagcccacc aagaataaag agctgacaga tgagttccgg
420
gagctgcggg ccacagtga gcggtgggg ctcatgaagg ccaaccatgt cttcttctg
480
ctgtacctgc tgcacatctt gctgctggat ggtgcagcct ggctcaccct ttgggtcttt
540
gggacgtcct ttttgccctt cctcctctgt gcgggtgctgc tcagtgcagt tcaggcccag
600
gctggctggc tgcagcatga ctttgggcac ctgtcggctt tcagcacctc aaagtggaaac
660
catctgctac atcattttgt gattggccac ctgaaggggg ccccgccag ttggtggaac
720
cacatgcact tccagcacca tgccaagccc aactgcttcc gcaaagacc agacatcaac
780
atgcatecct tcttctttgc cttggggaag atcctctctg tggagcttgg gaaacagaag
840
aaaaaatata tgccgtacaa ccaccagcac aaatacttct tcctaattgg gccccagcc
900
ttgctgcctc tctacttcca gtggtatatt ttctattttg ttatccagcg aaagaagtgg
960
gtggacttgg tctggatgat taccttctac gtccgcttct tctcactta tgtgccacta
1020
ttggggctga aagccttctt gggccttttc ttcatagtca ggttcttggg aagcaactgg
1080
tttgtgtggg tgacacagat gaaccatatt cccatgcaca ttgatcatga ccggaacatg
1140
gactgggttt ccaccagct ccaggccaca tgcaatgtcc acaagtctgc cttcaatgac
1200
tggttcagtg gacacctcaa cttccagatt gagcaccatc ttttccac gatgcctcga
1260
cacaattacc acaaagtggc tcccctgggt cagtccttgt gtgccaagca tggcatagag
1320
taccagtcca agcccctgct gtcagccttc gccgacatca tccactcact aaaggagtca
1380
gggcagctct ggctagatgc ctatcttcac caataacaac agccacccctg ccagctctgg
1440
aagaagagga ggaagactct ggagccaagg cagaggggag cttgaggggac aatgccacta
1500
tagtttaata ctgagagggg gttgggtttg gggacataaa gcctctgact caaactcctc
1560
ccttttatct tctagccaca gttctaagac ccaaagtggg ggggtggacac agaagtcctt
1620
aggaggggaag gagctgttgg ggcaggggtg taaattatct cctttttcta gtttggcaca
1680

tgcaggtagt tgggtgaacag agagaaccag gagggtaaca gaagaggagg gacctactga
 1740
 acccagagtc aggaagagat ttaacactaa aattccactc atgccgggcg tgggtggcacg
 1800
 cgcctgtaat ccagctacc caggaggctg aggcaggaga atcgcttgaa ccggggagggt
 1860
 ggaggttgca gtgagctgag atcacgccat tgtactccag cctgggagac agagcctcca
 1920
 tctccaaagg aaaaacaaaa gggtattctg tattgtaatt taaaaataaa atttcttcta
 1980
 tttgaatttt taaagttaaa aacgtaagta aatcctgtca ttgctaacag ggccacatat
 2040
 ggactcttac tctttctct agacccccag agtgtagaat gtgatacact tttgtccttt
 2100
 tctctgagga tgtgtgcct agtgtcgtgg aatctgcctg accattgcaa gcatccaatt
 2160
 ttgtgaccag ttcttttgca ggaaattgtt tctgagaaga ctggaagaca agaaatatcc
 2220
 cacctcttct aacaagatct gaattgttcg aaaagcagcc agtgcctaac ttgtagctcc
 2280
 acttatgcc aactgtatata tacctctcgt gagcatagca agtgatttaa tattttgaaa
 2340
 agatggctaa aatcctttta atgaacagca ctaaagttat atgtattaga ggagaattat
 2400
 tgaatgagat ggagaaagag ttctgaaatt aatatttaca ttttggttt tttacagata
 2460
 atattatatt tctgagtgac cagacgaaag agaaggagta gaaaggatga ttcttctttg
 2520
 gccatcattt ggtacagtct catttccaag tcatgtataa tctttatggc ttccaaggac
 2580
 aagaattaaa atactctttt acgtaaaaaa aata
 2614

<210> 3524

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3524

Met	Ala	Pro	Asp	Pro	Leu	Ala	Ala	Glu	Thr	Ala	Ala	Gln	Gly	Leu	Thr
1				5				10					15		
Pro	Arg	Tyr	Phe	Thr	Trp	Asp	Glu	Val	Ala	Gln	Arg	Ser	Gly	Cys	Glu
			20				25						30		
Glu	Arg	Trp	Leu	Val	Ile	Asp	Arg	Lys	Val	Tyr	Asn	Ile	Ser	Asp	Phe
			35				40					45			
Ser	Arg	Arg	His	Pro	Gly	Gly	Ser	Arg	Val	Ile	Ser	His	Tyr	Ala	Gly
			50				55				60				
Gln	Asp	Ala	Thr	Asp	Pro	Phe	Val	Ala	Phe	His	Ile	Asn	Lys	Gly	Leu
65					70					75				80	
Val	Lys	Lys	Tyr	Met	Asn	Ser	Leu	Leu	Ile	Gly	Glu	Leu	Ser	Pro	Glu
				85					90					95	
Gln	Pro	Ser	Phe	Glu	Pro	Thr	Lys	Asn	Lys	Glu	Leu	Thr	Asp	Glu	Phe
			100					105					110		
Arg	Glu	Leu	Arg	Ala	Thr	Val	Glu	Arg	Met	Gly	Leu	Met	Lys	Ala	Asn

		115					120					125			
His	Val	Phe	Phe	Leu	Leu	Tyr	Leu	Leu	His	Ile	Leu	Leu	Leu	Asp	Gly
	130					135					140				
Ala	Ala	Trp	Leu	Thr	Leu	Trp	Val	Phe	Gly	Thr	Ser	Phe	Leu	Pro	Phe
145					150					155					160
Leu	Leu	Cys	Ala	Val	Leu	Leu	Ser	Ala	Val	Gln	Ala	Gln	Ala	Gly	Trp
				165					170					175	
Leu	Gln	His	Asp	Phe	Gly	His	Leu	Ser	Val	Phe	Ser	Thr	Ser	Lys	Trp
			180					185					190		
Asn	His	Leu	Leu	His	His	Phe	Val	Ile	Gly	His	Leu	Lys	Gly	Ala	Pro
	195						200					205			
Ala	Ser	Trp	Trp	Asn	His	Met	His	Phe	Gln	His	His	Ala	Lys	Pro	Asn
	210					215					220				
Cys	Phe	Arg	Lys	Asp	Pro	Asp	Ile	Asn	Met	His	Pro	Phe	Phe	Phe	Ala
225				230						235					240
Leu	Gly	Lys	Ile	Leu	Ser	Val	Glu	Leu	Gly	Lys	Gln	Lys	Lys	Lys	Tyr
				245					250					255	
Met	Pro	Tyr	Asn	His	Gln	His	Lys	Tyr	Phe	Phe	Leu	Ile	Gly	Pro	Pro
			260					265					270		
Ala	Leu	Leu	Pro	Leu	Tyr	Phe	Gln	Trp	Tyr	Ile	Phe	Tyr	Phe	Val	Ile
	275						280					285			
Gln	Arg	Lys	Lys	Trp	Val	Asp	Leu	Val	Trp	Met	Ile	Thr	Phe	Tyr	Val
	290					295					300				
Arg	Phe	Phe	Leu	Thr	Tyr	Val	Pro	Leu	Leu	Gly	Leu	Lys	Ala	Phe	Leu
305				310						315					320
Gly	Leu	Phe	Phe	Ile	Val	Arg	Phe	Leu	Glu	Ser	Asn	Trp	Phe	Val	Trp
				325					330					335	
Val	Thr	Gln	Met	Asn	His	Ile	Pro	Met	His	Ile	Asp	His	Asp	Arg	Asn
			340					345					350		
Met	Asp	Trp	Val	Ser	Thr	Gln	Leu	Gln	Ala	Thr	Cys	Asn	Val	His	Lys
	355						360					365			
Ser	Ala	Phe	Asn	Asp	Trp	Phe	Ser	Gly	His	Leu	Asn	Phe	Gln	Ile	Glu
	370					375				380					
His	His	Leu	Phe	Pro	Thr	Met	Pro	Arg	His	Asn	Tyr	His	Lys	Val	Ala
385				390						395					400
Pro	Leu	Val	Gln	Ser	Leu	Cys	Ala	Lys	His	Gly	Ile	Glu	Tyr	Gln	Ser
				405					410					415	
Lys	Pro	Leu	Leu	Ser	Ala	Phe	Ala	Asp	Ile	Ile	His	Ser	Leu	Lys	Glu
			420					425					430		
Ser	Gly	Gln	Leu	Trp	Leu	Asp	Ala	Tyr	Leu	His	Gln				
	435					440									

<210> 3525

<211> 1116

<212> DNA

<213> Homo sapiens

<400> 3525

nnaaaaagcc acagaaaatg aacatccctt cagaatgggt ttgaagagct gatccagtgg
60

attaaagagg ggaaactggg agtttccaat taacaatgaa gcaggagctg actaaggctt

170
tggaacagaa accagatgat gcacaatatt attgtcaaag agcttattgt cacattcttc
180

ttgggagtta ctatggatct gtaaataact gacgaaaaac gcatcttttt ctacatagtt
 240
 gctgttgctg atgcaaagaa gtctcgcgaa ttcaatccaa ataattccac tgctgtgctg
 300
 agaaaagga tatgtgaata ccatttaaaa aactatgctg ctgctctaga aacttttata
 360
 ggaggacaaa aattangtgc agatgctaata ttcagtgaact ggattaaaag gtgtcaagaa
 420
 gctcagaatg gctcagaatc tgagggtggtg atggaaccag ccctggaagg cacaggcaaa
 480
 gaggggaaga aagcatcctc caggaagcgt acattggctg aacctccagc gaagggcctc
 540
 ctgcagccag tgaagctcag cagggcagaa ctgtacaagg agcctaccaa tgaggagctt
 600
 aatgccttc gggagactga gatcttggtc cactccagct tgcttcgttt acaggtagag
 660
 gagctactaa aggaagtaag gctgtcagag aagaagaagg atcggattga tgccttccta
 720
 cgggaggtca accagcgggt tgtgagggtg ccctcagtcc ctgagacaga gctcactgac
 780
 caggcatggc tcccagctgg ggttcgagtg ccctccacc aagtgccta tgccgtgaag
 840
 ggctgtttcc gttcctgcc ccagcccag gttactgttg tgggcagcta ctttctgggc
 900
 acctgcatcc gaccagacat caatgtggat gtggcactga ccatgcccag ggaaatccta
 960
 caggacaagg acgggctgaa ccagcgctac ttccgcaagc gtgccctcta cctggcccac
 1020
 ttggetcacc acctggccca ggacccctc tttggcagtg tttgcttctc ctacacaaat
 1080
 ggctgccacc tgaaaccctc attgttgctc cggcgg
 1116

<210> 3526

<211> 304

<212> PRT

<213> Homo sapiens

<400> 3526

Ile Thr Asp Glu Lys Arg Ile Phe Phe Tyr Ile Val Ala Val Ala Asp
 1 5 10 15
 Ala Lys Lys Ser Arg Glu Phe Asn Pro Asn Asn Ser Thr Ala Val Leu
 20 25 30
 Arg Lys Gly Ile Cys Glu Tyr His Leu Lys Asn Tyr Ala Ala Ala Leu
 35 40 45
 Glu Thr Phe Ile Gly Gly Gln Lys Leu Xaa Ala Asp Ala Asn Phe Ser
 50 55 60
 Asp Trp Ile Lys Arg Cys Gln Glu Ala Gln Asn Gly Ser Glu Ser Glu
 65 70 75 80
 Val Val Met Glu Pro Ala Leu Glu Gly Thr Gly Lys Glu Gly Lys Lys
 85 90 95
 Ala Ser Ser Arg Lys Arg Thr Leu Ala Glu Pro Pro Ala Lys Gly Leu
 100 105 110
 Leu Gln Pro Val Lys Leu Ser Arg Ala Glu Leu Tyr Lys Glu Pro Thr

115	120	125
Asn Glu Glu Leu Asn Arg Leu Arg Glu Thr Glu Ile Leu Phe His Ser		
130	135	140
Ser Leu Leu Arg Leu Gln Val Glu Glu Leu Leu Lys Glu Val Arg Leu		
145	150	155
Ser Glu Lys Lys Lys Asp Arg Ile Asp Ala Phe Leu Arg Glu Val Asn		
165	170	175
Gln Arg Val Val Arg Val Pro Ser Val Pro Glu Thr Glu Leu Thr Asp		
180	185	190
Gln Ala Trp Leu Pro Ala Gly Val Arg Val Pro Leu His Gln Val Pro		
195	200	205
Tyr Ala Val Lys Gly Cys Phe Arg Phe Leu Pro Pro Ala Gln Val Thr		
210	215	220
Val Val Gly Ser Tyr Leu Leu Gly Thr Cys Ile Arg Pro Asp Ile Asn		
225	230	235
Val Asp Val Ala Leu Thr Met Pro Arg Glu Ile Leu Gln Asp Lys Asp		
245	250	255
Gly Leu Asn Gln Arg Tyr Phe Arg Lys Arg Ala Leu Tyr Leu Ala His		
260	265	270
Leu Ala His His Leu Ala Gln Asp Pro Leu Phe Gly Ser Val Cys Phe		
275	280	285
Ser Tyr Thr Asn Gly Cys His Leu Lys Pro Ser Leu Leu Leu Arg Pro		
290	295	300

<210> 3527

<211> 2838

<212> DNA

<213> Homo sapiens

<400> 3527

cagggattga aggtccgagg gtgagtgggc tgggcatgag ggctgtgggg cggggcgtgg
60
ggcgggcacc ctgcattctc ctcccgggtg tacattctct ccctccggac ctccgtcatc
120
ccgtctgtgc cagaggaacc attgtccctg ggtcccaggt ctgcttgagg agggactggg
180
ttggggagag atgaagaccc tgtggaccag ggctcactct tcttctcttg tccccagg
240
ggctcctccg gccccagagg gcggcccggc cccccgggtc ctccaggggg tcctatccaa
300
ttgcaacaag atgatcttgg ggcagctttc cagacgtgga tggacaccag tggagcactc
360
aggccagaga gttacagcta tccagaccgg ctgggtgctgg accagggagg agagatcttt
420
aaaaccttac actacctcag caacctcatc cagagcatta agacgcccct gggcaccaaa
480
gagaaccccc cccgggtctg cagggaacct atggactgtg agcagaagat ggtggatggt
540
acctactggg tggatccaaa ctttggtgct tctctgaca ccactgaggt ctctgcaac
600
ttcactcatg gtggacagac gtgtctcaag cccatcacgg cctccaaggt cgagtttgcc
660
atcagccggg tccagatgaa tttctgcac ctgctaagct ccgaggtgac ccagcacatc
720

accatccact gccttaacat gaccgtgtgg caggagggca ctgggcagac cccagccaag
780
caggccgtac gcttccgggc ctggaatgga cagatttttg aagctggggg tcagttccgg
840
cccaggtgt ccatggatgg ctgcaaggtc caagatggcc gctggcatca gacactcttc
900
accttccgga cccaagaccc ccaacagctg cccatcatca gtgtggacaa cctccctcct
960
gcctcatcag ggaagcagta ccgcctggaa gttggacctg cgtgcttcct ctgacctctg
1020
acctcgtggc cactctaggc ctcatggagg agggaagagg aagaggcaag gggagggtag
1080
tgaggggcag atggctccag gagaggcagc tcccctgccc aagggtcctt gggcagaccc
1140
cagctgttgt ctgccagta gaagtgggtg ggggtaggag gggatagggt gtccttggga
1200
acaatggatc ccagcttagc cccaaagacc aaccaaagag ccagccagag taagctggac
1260
ctgcaacctg cctgagcccc gtggcctctc agctctgagg ccaccccggt cctcccccag
1320
cttcctgccc aaagagcccc acattcaagc caacttgagg gaagggggcg tctcgtcagc
1380
tggtccctgc tagggagcta ttgatgtgca atattagaaa ggagacatga aaaaaggaga
1440
aaaggaaaga cagaagtgtat tatatatatt atttaaaca acaaaaagaa ggtgcgttac
1500
tatttttttt tcacccggga aagaggtgag aggatgggaa ggagcagcca ggcgtgggaa
1560
gcggcgagat cctcgggctg ggggtgcccc cgtttgctac ctcccactgt gaaatcgctg
1620
gtgctcacia ttgtctctca cagtgtatgt gattttttta aggaaaaaaa aaaatcccta
1680
tttaagattc tgaagggtgt accattattt tgccacagac tttgaagaaa cttttggatg
1740
tggggcatca tccgcatctt tctctctcct ccaaagaca aagtttgggg aatttttgaa
1800
ttttcctagc atcgcccttg tgctcatcag gtaatctgct aaggaggaaa aaagaaaaga
1860
aaaaaggaaa aaaaaaaaaa aaagcaaac aaaaacaaa acaaaaacc taccagaaac
1920
cagaagtaga gagatttacc atataactta tggactttga aatgtctgtc cttttaaggc
1980
agcaggagg cctgggtgag aacatgttgg cttggccttc acggtcctgg agggaggtga
2040
ggctggcctt ggaaggcgtg ccctggagag gtcttgggtg aaaacttgac cttgaagaaa
2100
ccaatcacia aagcggcggt gggtcagggc taggcttaga ggtgaagcat caacatggaa
2160
ccatctcagg aagccgcac gcctcttccg aggtcctcac ttccaggagc ctgtccttgc
2220
aagatgcaat categttctt gctttttcat tgtcattaaa ttctgtagaa acccattgtc
2280
attagctcca agtgtaaatt tgggtcaagg agacagaata ataatgggaa tctcggagtt
2340

cgacaccata gtgacgttca gcgtcctctg aattgtgcta catcagcgaa caagtcggcg
 2400
 cttgaattgg attttgaggt tattttaacc atggaattat ttttatagaa ggggaaaatg
 2460
 tatgtgaaag tctctatttg tgtatttctc tcctaaagtt gtgtctcttt gggaattgga
 2520
 tttgattttt attatttaac acctcacttt ggcccgtccc cctcccaac acttctgtat
 2580
 cctcgccctg ccgccccagc ctggacgctc tgcgtggaag tgcgtgtttg tagcagctcg
 2640
 ggccctcatct cagcgctcgg atccctcctg ctgccagaat ccaactggcct ctgtctcatt
 2700
 cttgggtttt cctgctgtct tcgtttacgt ctctgtccac atgtcagtgt attaaaacc
 2760
 caatgggttc cgtttctcct tttccctctt ggattttaaa taaatattta aaactgaggg
 2820
 aatggaaaaa aaaaaaaa
 2838

<210> 3528

<211> 281

<212> PRT

<213> Homo sapiens

<400> 3528

Gly	Gly	Thr	Gly	Leu	Gly	Arg	Asp	Glu	Asp	Pro	Val	Asp	Gln	Gly	Ser
1				5					10					15	
Leu	Phe	Phe	Ser	Cys	Ser	Pro	Arg	Gly	Pro	Pro	Gly	Pro	Arg	Gly	Arg
			20					25					30		
Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Gly	Pro	Ile	Gln	Leu	Gln	Gln	Asp
			35				40					45			
Asp	Leu	Gly	Ala	Ala	Phe	Gln	Thr	Trp	Met	Asp	Thr	Ser	Gly	Ala	Leu
	50					55				60					
Arg	Pro	Glu	Ser	Tyr	Ser	Tyr	Pro	Asp	Arg	Leu	Val	Leu	Asp	Gln	Gly
65					70				75					80	
Gly	Glu	Ile	Phe	Lys	Thr	Leu	His	Tyr	Leu	Ser	Asn	Leu	Ile	Gln	Ser
			85					90					95		
Ile	Lys	Thr	Pro	Leu	Gly	Thr	Lys	Glu	Asn	Pro	Ala	Arg	Val	Cys	Arg
			100					105					110		
Asp	Leu	Met	Asp	Cys	Glu	Gln	Lys	Met	Val	Asp	Gly	Thr	Tyr	Trp	Val
	115					120						125			
Asp	Pro	Asn	Leu	Gly	Cys	Ser	Ser	Asp	Thr	Ile	Glu	Val	Ser	Cys	Asn
	130					135					140				
Phe	Thr	His	Gly	Gly	Gln	Thr	Cys	Leu	Lys	Pro	Ile	Thr	Ala	Ser	Lys
145					150					155				160	
Val	Glu	Phe	Ala	Ile	Ser	Arg	Val	Gln	Met	Asn	Phe	Leu	His	Leu	Leu
			165					170					175		
Ser	Ser	Glu	Val	Thr	Gln	His	Ile	Thr	Ile	His	Cys	Leu	Asn	Met	Thr
			180					185					190		
Val	Trp	Gln	Glu	Gly	Thr	Gly	Gln	Thr	Pro	Ala	Lys	Gln	Ala	Val	Arg
	195					200						205			
Phe	Arg	Ala	Trp	Asn	Gly	Gln	Ile	Phe	Glu	Ala	Gly	Gly	Gln	Phe	Arg
	210					215					220				
Pro	Glu	Val	Ser	Met	Asp	Gly	Cys	Lys	Val	Gln	Asp	Gly	Arg	Trp	His

225					230					235				240
Gln	Thr	Leu	Phe	Thr	Phe	Arg	Thr	Gln	Asp	Pro	Gln	Gln	Leu	Pro Ile
				245					250					255
Ile	Ser	Val	Asp	Asn	Leu	Pro	Pro	Ala	Ser	Ser	Gly	Lys	Gln	Tyr Arg
			260					265					270	
Leu	Glu	Val	Gly	Pro	Ala	Cys	Phe	Leu						
		275					280							

<210> 3529

<211> 3026

<212> DNA

<213> Homo sapiens

<400> 3529

```

agctgctggt gcagggtgcgg atagatttca tcctctgtcg cagcgagttt aatgacgcc
60
tcgtcatctc caaccggggc ctgcgggatg gagagctgtt tgaaattgtc attcagaaga
120
tggtggaccg ctggtcaggc tccattgagg ctggagtgc tgctattcgg cctgaagacc
180
tggaattccc caaccccatg acagacattg actatgacac atggatgctg agtggtagac
240
ccatcatgca agacggtaac acgatgcgca acaattatgg gtgtgacctg gatgcgctgg
300
gcacagggtc acgcattggc atgatgcgaa ctgccaaagg cgacctgcac tacttcatca
360
acggccagga ccaaggcgct gcctgctcgg gcctgcctcc ggagggtgat gcggtagtgc
420
atctctatgg ccagtgtgtc caagtgtcca tcaccaatgc caccggcccc atggacaaca
480
gcctggcgac cagcaacact gccaccgaga agtccttccc actgcnactc cccagtggct
540
ggcgtggctc accgattcca cagtacttgc ggcaagaacg tcactctaga ggaggatggc
600
acgagggcag tgcgtgccgc tggctatgct catggccttg tcttcagtac caaggagctg
660
agggctgagg aagtctttga ggtgaaagtg gaagagctag atgagaagtg ggcagggtcc
720
ctgcggctgg ggctgaccac actagcaccg ggggagatgg gacccggggc aggcgggtgg
780
ggcccagggc tgctccttc cctgccagag ctccggacga agaccacttg gatggtatcc
840
agctgtgaag tgaggcgtga tgggcagctc cagaggatga actatggccg gaacctagag
900
aggctggggg tgaagtggct ggctccaggg acaggggagg ggttgggagt ggagggtggc
960
gggagagggt ggctgaacat cgtccgtcct tgtcctacct cggtcctagg tggggagccg
1020
tgtgggtgtt cgtcgggggg cagatgacac gatgcacatc ctggtggatg gagaggatat
1080
ggggcctgca gccactggca ttgccaagaa cgtgtgggct gtgttggatc tctacgggcc
1140
agtccgcggt gtgtcaattg tcagttccac gagactggag gagtccagaag gcaccagcc
1200

```

tccttcccc agttcagaca ccggcagtga gggcgaggag gatgacgagg gcgaggagca
1260
tggcctggga ggccagaatg aagtgggtat tatacccacc accctcgagt tcctggagaa
1320
ccatgggaag aatatacctt tgtctaattg gaaccgtacg gccacacggg tggccagcta
1380
caatcagggc atcgttgtca tcaaccaacc tctggtgccc cagctgctgg tgcaggtgcg
1440
gatagatttc ctaaaccgac agtggacatc ttcccttgct ctgggagtca tcacctgcgc
1500
gcctgagagg ctcaacttcc ctgcttctgc ctgtgccctc aaacgggcag cctggctgct
1560
gcggggccgt ggggtcttcc acaacggtct caagatctgc gagaagtctg ggcccaatct
1620
ggacacgtgc cctgaaggca ccatacctggg actgcggctg gacagctctg gggggctgca
1680
tcttcattgt aatgggggtg accagggggt agctgtgcca gatgtgcccc agccctgcca
1740
tgcgcttggt gacctctatg ggcagtgtga gcaggtatca aagagagtgt gtgctggggg
1800
ccaccactg ccgctagtcc tctaaagagc tgcgagtacc atgccctttg ctctcgcttc
1860
caagaactcc tgctgcttcc cgaagattat ttcattgcctc cgccaaagcg aagcctgtgc
1920
tactgtgagt cttgccggaa gctgcgagga gacgaggccc acaggcgagc aggggagcct
1980
ccccgggaat atgcactgcc ctttggctgg tgcaggttca acctcagagt gaatccccgc
2040
ctggaggctg ggacactaac caagaagtgg cacatggcat atcacgggag caatgttgcc
2100
gctgtacgga gagtgtgga ccgaggggag ctgggagcag gtactgcctc catcctgagc
2160
tgccgtcctt tgaagggaga acctggggta ggggttcgagg agcctggcga gaactgtgca
2220
cctcctcggg aggagcagcc ccctcctgcg ctgctttccc cctcccttca atatgctggg
2280
gcgagagacc tggcctccaa agtgcaattc cgggaccca aatcccagcg gacgcaccag
2340
gctcaggtg cgttccaggt gtgtgtgcgc cctggctcct acaccccggg accccttcc
2400
gctgcccttg gagaacctcc tgacctcac ttcagtccag ccgaacttga gtgggtcact
2460
aaggagaagg ggccacact cctctgtgcc ctgctggtac gggtggaatg aggggtgaga
2520
caccactact acaagcacag tcgggccgcg ggcccatgga ctctgagtgg cgactgcctc
2580
cacctattc ccgtgactcg tggcatgcgc aggtgtgga gcttggcagc cgcgcaggag
2640
catgtaggca ggctctcaga ttaggtggc aagtggcaca gctccatgtc cggaggccca
2700
gcactccgtc tgatgggagg agccgtggga gccagctcc aggccctggt acccctcttc
2760
atgcactgat ttggggaaca tgactccctt ttactccct accccacatc acttaattta
2820

tttccggtttt tgtttctggt tactgtgaat cccagaggag tctctccctg tgcccacatg
 2880
 aagctgctttt ttccggggcc accgggcggg agtggggaag ggtgggcgca cggaagatgg
 2940
 gggcctctgt acagttgtta ctgactctga tttctaagga gccataaac accgtctcag
 3000
 agcaaaaaaa aaaaaaaaaa aaaaaa
 3026

<210> 3530
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 3530
 Met Ala Ser Val Ser Lys Cys Pro Ser Pro Met Pro Pro Ala Pro Trp
 1 5 10 15
 Thr Thr Ala Trp Arg Pro Ala Thr Leu Pro Pro Arg Ser Pro Ser His
 20 25 30
 Cys Xaa Ser Pro Val Ala Gly Val Ala His Arg Phe His Ser Thr Cys
 35 40 45
 Gly Lys Asn Val Thr Leu Glu Glu Asp Gly Thr Arg Ala Val Arg Ala
 50 55 60
 Ala Gly Tyr Ala His Gly Leu Val Phe Ser Thr Lys Glu Leu Arg Ala
 65 70 75 80
 Glu Glu Val Phe Glu Val Lys Val Glu Glu Leu Asp Glu Lys Trp Ala
 85 90 95
 Gly Ser Leu Arg Leu Gly Leu Thr Thr Leu Ala Pro Gly Glu Met Gly
 100 105 110
 Pro Gly Ala Gly Gly Gly Gly Pro Gly Leu Pro Pro Ser Leu Pro Glu
 115 120 125
 Leu Arg Thr Lys Thr Thr Trp Met Val Ser Ser Cys Glu Val Arg Arg
 130 135 140
 Asp Gly Gln Leu Gln Arg Met Asn Tyr Gly Arg Asn Leu Glu Arg Leu
 145 150 155 160
 Gly Val Lys Trp Leu Ala Pro Gly Thr Gly Glu Gly Leu Gly Val Glu
 165 170 175
 Val Ala Gly Arg Gly Gly Leu Asn Ile Val Arg Pro Cys Pro Thr Ser
 180 185 190
 Val Leu Gly Gly Glu Pro Cys Gly Cys Ser Ser Gly Gly Arg
 195 200 205

<210> 3531
 <211> 879
 <212> DNA
 <213> Homo sapiens

<400> 3531
 nggatcctca gacttaggaa gggacgctct gaagatatatt atagaattta cagccacgat
 60
 ggcaccgatt ctccccctga tgctgatgag gtggttatcg tctcaacaa cttcaaaagc
 120
 aaaattatta aagtgaaggt tcagaagaag gcagatatgg tgaacgaaga cttgctgagt
 180

gatggaacga gtgagaatga atctggattt tgggattcct tcaaattggg ctttacagga
 240
 cagaagactg aggaagtga gcaagataaa gatgacataa ttaatatattt ctccgttgca
 300
 tctggtcatc tctacgaaag atttcttcgc ataattgatgc tatccgtgct gaagaatacc
 360
 aagactcctg tgaaattctg gttcttgaag aattacttgt cccccacatt taaggagttt
 420
 ataccttaca tggcaaatga atacaatttc cagtatgagc ttgttcagta caaatggccc
 480
 cgggtggcttc atcaacaaac tgaaaaacag cgtatcatct ggggttaca gatcctcttc
 540
 ctggatgtac ttttcccact agttgttgac aagttcctgt ttgtggatgc tgatcagatt
 600
 gtacgaacag atctgaaaga gttaagagat ttcaatttgg atggtgctcc ttatgggttac
 660
 actcctttct gtgacagccg aagagaaatg gacggctaca gggtctggaa gtcagggtag
 720
 tgggccagtc atttagccgg gcgaaagtat catatcaggt actgaaaaga agcactccta
 780
 acactgttac ggggttttcc ttaaaattga ttttgtgtgg ttaaaattgt gaataggtaa
 840
 tacattggta tggttgaaaa ataaaaatga taaaaaata
 879

<210> 3532

<211> 254

<212> PRT

<213> Homo sapiens

<400> 3532

Xaa	Ile	Leu	Arg	Leu	Arg	Lys	Gly	Arg	Ser	Glu	Asp	Ile	Tyr	Arg	Ile
1				5					10					15	
Tyr	Ser	His	Asp	Gly	Thr	Asp	Ser	Pro	Pro	Asp	Ala	Asp	Glu	Val	Val
			20					25					30		
Ile	Val	Leu	Asn	Asn	Phe	Lys	Ser	Lys	Ile	Ile	Lys	Val	Lys	Val	Gln
		35					40					45			
Lys	Lys	Ala	Asp	Met	Val	Asn	Glu	Asp	Leu	Leu	Ser	Asp	Gly	Thr	Ser
	50					55					60				
Glu	Asn	Glu	Ser	Gly	Phe	Trp	Asp	Ser	Phe	Lys	Trp	Gly	Phe	Thr	Gly
65					70					75					80
Gln	Lys	Thr	Glu	Glu	Val	Lys	Gln	Asp	Lys	Asp	Asp	Ile	Ile	Asn	Ile
				85					90					95	
Phe	Ser	Val	Ala	Ser	Gly	His	Leu	Tyr	Glu	Arg	Phe	Leu	Arg	Ile	Met
			100						105					110	
Met	Leu	Ser	Val	Leu	Lys	Asn	Thr	Lys	Thr	Pro	Val	Lys	Phe	Trp	Phe
		115					120					125			
Leu	Lys	Asn	Tyr	Leu	Ser	Pro	Thr	Phe	Lys	Glu	Phe	Ile	Pro	Tyr	Met
	130					135				140					
Ala	Asn	Glu	Tyr	Asn	Phe	Gln	Tyr	Glu	Leu	Val	Gln	Tyr	Lys	Trp	Pro
145					150					155					160
Arg	Trp	Leu	His	Gln	Gln	Thr	Glu	Lys	Gln	Arg	Ile	Ile	Trp	Gly	Tyr
			165						170					175	
Lys	Ile	Leu	Phe	Leu	Asp	Val	Leu	Phe	Pro	Leu	Val	Val	Asp	Lys	Phe

			180					185					190				
Leu	Phe	Val	Asp	Ala	Asp	Gln	Ile	Val	Arg	Thr	Asp	Leu	Lys	Glu	Leu		
		195						200				205					
Arg	Asp	Phe	Asn	Leu	Asp	Gly	Ala	Pro	Tyr	Gly	Tyr	Thr	Pro	Phe	Cys		
	210					215					220						
Asp	Ser	Arg	Arg	Glu	Met	Asp	Gly	Tyr	Arg	Phe	Trp	Lys	Ser	Gly	Tyr		
225					230					235					240		
Trp	Ala	Ser	His	Leu	Ala	Gly	Arg	Lys	Tyr	His	Ile	Arg	Tyr				
			245					250									

<210> 3533

<211> 1151

<212> DNA

<213> Homo sapiens

<400> 3533

```

gaattcggca cgagggcttc tataggagag ctttagaatg aagtcattta gaggagcagg
60
cgaatcctaa cgcacatctc ctcttttagct ggactgaacc caaacatgaa tgtcaacagc
120
atggacatga ccggtggcct gtcggtgaag gacccatccc agtcccagtc acgcctcccc
180
cagtggacgc accccaactc catggataac ttgcccagtg ccgcttcccc cctggagcag
240
aaccctagca agcatgggtg tatccctgga ggtctaagca ttgggcctcc aggttaagtc
300
tccattgatg actcctatgg ccggtacgat ttaatccaga acagtgaagtc accagccagt
360
cctcccgtag ctgttcccca tagctgggtca cgtgccaaat ctgacagtga taaaatctca
420
aatggctcta gcatcaactg gccccagaa ttccatccgg gagttccatg gaaaggactg
480
cagaatattg accctgagaa tgaccctgac gtcactcctg gcagtgtccc cactgggcct
540
accatcaaca ccaccatcca ggatgtcaac cgctacctcc tcaagagtgg agggctctcc
600
ccgccatcat ctccagaatgc cagctgcct tcttcgagtg cctggccact cagtgcctcc
660
ggctacagta gctctttcag cagcattgca tccgcaccta gtgttgacag taaactgtca
720
gacatcaaat cgacgtggtc ctctggccct acctcccaca cgdaagcctc tctgtctcat
780
gaactatgga aggtgcccag aaacagtact gcaccacga ggccacctcc aggggttaacc
840
aatcccaagc cctcctccac ctgggggtgcc agccccctcg gctggaccag ctctactcc
900
tcgggttctg cctggagcac cgacacctca ggaagaacca gcagctggct cgttcttcga
960
aacctactc cccaggtgca atatgggtgcc cctgcatcac tgagcatgat ccagggaggg
1020
ttcccgcttg gccccaatg cagatgagggc tgtctgggtg ggcaggatag ttgggggttc
1080
ttggtcaggg tcataagtg acgctgcatg ggaggagatg agcaagtgcc aggattggct
1140

```

ccagcagcgg c
1151

<210> 3534
<211> 313
<212> PRT
<213> Homo sapiens

<400> 3534
Met Asn Val Asn Ser Met Asp Met Thr Gly Gly Leu Ser Val Lys Asp
1 5 10 15
Pro Ser Gln Ser Gln Ser Arg Leu Pro Gln Trp Thr His Pro Asn Ser
20 25 30
Met Asp Asn Leu Pro Ser Ala Ala Ser Pro Leu Glu Gln Asn Pro Ser
35 40 45
Lys His Gly Ala Ile Pro Gly Gly Leu Ser Ile Gly Pro Pro Gly Lys
50 55 60
Ser Ser Ile Asp Asp Ser Tyr Gly Arg Tyr Asp Leu Ile Gln Asn Ser
65 70 75 80
Glu Ser Pro Ala Ser Pro Pro Val Ala Val Pro His Ser Trp Ser Arg
85 90 95
Ala Lys Ser Asp Ser Asp Lys Ile Ser Asn Gly Ser Ser Ile Asn Trp
100 105 110
Pro Pro Glu Phe His Pro Gly Val Pro Trp Lys Gly Leu Gln Asn Ile
115 120 125
Asp Pro Glu Asn Asp Pro Asp Val Thr Pro Gly Ser Val Pro Thr Gly
130 135 140
Pro Thr Ile Asn Thr Thr Ile Gln Asp Val Asn Arg Tyr Leu Leu Lys
145 150 155 160
Ser Gly Gly Ser Ser Pro Pro Ser Ser Gln Asn Ala Thr Leu Pro Ser
165 170 175
Ser Ser Ala Trp Pro Leu Ser Ala Ser Gly Tyr Ser Ser Ser Phe Ser
180 185 190
Ser Ile Ala Ser Ala Pro Ser Val Ala Gly Lys Leu Ser Asp Ile Lys
195 200 205
Ser Thr Trp Ser Ser Gly Pro Thr Ser His Thr Gln Ala Ser Leu Ser
210 215 220
His Glu Leu Trp Lys Val Pro Arg Asn Ser Thr Ala Pro Thr Arg Pro
225 230 235 240
Pro Pro Gly Leu Thr Asn Pro Lys Pro Ser Ser Thr Trp Gly Ala Ser
245 250 255
Pro Leu Gly Trp Thr Ser Ser Tyr Ser Ser Gly Ser Ala Trp Ser Thr
260 265 270
Asp Thr Ser Gly Arg Thr Ser Ser Trp Leu Val Leu Arg Asn Leu Thr
275 280 285
Pro Gln Val Gln Tyr Gly Ala Pro Ala Ser Leu Ser Met Ile Gln Gly
290 295 300
Gly Phe Pro Leu Gly Pro Gln Cys Arg
305 310

<210> 3535
<211> 723
<212> DNA
<213> Homo sapiens

<400> 3535

tccggacaaa gctctcagta tcctgggtgc cattgtttct tctactcagc cgtgtttttt
 60
 ctactgagac agacaaaccc tcagcccagg acagcagagg ccgtgggagt tcaggccaac
 120
 cggcagacct gctacaggtt ctctctgctg gtgaccaccc accccacaac cactcaagaa
 180
 gcctcatcaa aacattgttg gagaaaactg ggtgcccacg gaggagaaac ggaatgcaag
 240
 gagattgcaa tctgtgcttt gaaccagatg cactattact aatagctgga ggaaattttg
 300
 aagatcagct tagagaagaa gtggtccaga gagtttctct tctccttctc tattacatta
 360
 ttcacagga agagatctgt tcttcaaagc tcaacatgag taataaagag tataaatttt
 420
 acctacacag cctactgagc ctccaggcagg atgaagattc ctctttcctt tcacagaatg
 480
 agacagaaga tatcttggct ttcaccaggc agtactttga cacttctcaa agccagtgtg
 540
 tggaaaccaa aacgctgcag aaaaaatctg gaatagttag cagtgaaggt gctaataaaa
 600
 gtacgcttcc tcagttggca gccatgatca ttactttgtc cctccagggt gtttgtctgg
 660
 gacaaggaaa cttgccttcc ccagactact ttacagaata tattttcagt tccttgaatc
 720
 gta
 723

<210> 3536

<211> 163

<212> PRT

<213> Homo sapiens

<400> 3536

Met	Gln	Gly	Asp	Cys	Asn	Leu	Cys	Phe	Glu	Pro	Asp	Ala	Leu	Leu	Leu
1				5					10					15	
Ile	Ala	Gly	Gly	Asn	Phe	Glu	Asp	Gln	Leu	Arg	Glu	Glu	Val	Val	Gln
			20					25					30		
Arg	Val	Ser	Leu	Leu	Leu	Leu	Tyr	Ile	Ile	His	Gln	Glu	Glu	Ile	
		35					40				45				
Cys	Ser	Ser	Lys	Leu	Asn	Met	Ser	Asn	Lys	Glu	Tyr	Lys	Phe	Tyr	Leu
	50					55					60				
His	Ser	Leu	Leu	Ser	Leu	Arg	Gln	Asp	Glu	Asp	Ser	Ser	Phe	Leu	Ser
65					70					75				80	
Gln	Asn	Glu	Thr	Glu	Asp	Ile	Leu	Ala	Phe	Thr	Arg	Gln	Tyr	Phe	Asp
			85						90					95	
Thr	Ser	Gln	Ser	Gln	Cys	Met	Glu	Thr	Lys	Thr	Leu	Gln	Lys	Lys	Ser
		100						105				110			
Gly	Ile	Val	Ser	Ser	Glu	Gly	Ala	Asn	Glu	Ser	Thr	Leu	Pro	Gln	Leu
		115					120					125			
Ala	Ala	Met	Ile	Ile	Thr	Leu	Ser	Leu	Gln	Gly	Val	Cys	Leu	Gly	Gln
	130					135					140				
Gly	Asn	Leu	Pro	Ser	Pro	Asp	Tyr	Phe	Thr	Glu	Tyr	Ile	Phe	Ser	Ser

145
Leu Asn Arg

150

155

160

<210> 3537
<211> 714
<212> DNA
<213> Homo sapiens

<400> 3537
 tttttttttt tttttttttt tttttttttt tttttttttt agcaatatat atatataatt
 60
 tatttacatt cacgcccgat aaaaccccta tgtgccccgg cggccgggca aggctgtgta
 120
 cataaggcca agagtaagtg cgtgaatgca cttaagacaa agtcaggaca cgagcttcac
 180
 atgacaggcc ccgcgtgggc gaccagccag ccctggggac gggcacgcca cgccacacac
 240
 acactacca ctgtacagcc tgggactccc attgcatatt cacaggcccc gccgggcagg
 300
 gcacctcaag gctgggggag gggcaggggc agggaggagc cgtgggggtgt ccctgggtgg
 360
 gtggagaggg cagcatgtga gaggcaaatg tgcaccaaca ctgggcgtga gacgtgagca
 420
 gcctcaggtg tacggcatga gatgtgtgtg gttggggggt gtctgctga cccgggaggg
 480
 ggggtgtgtg gagatgagca cacgaggcat gcgtggcacg tgctcgtgtg gtggtcgct
 540
 gcctgaatcc aggggctacc ccctgtccgg ctgtggccct cggtcctgca gggttggaag
 600
 aagggtcctt cagacgtgcc cctaccagc aggcacagaa atgtttgcat aagggtccagc
 660
 tcaggcagga gctctggggc cctggcccag gccagtggtg tgctgcatg gcc
 714

<210> 3538
<211> 154
<212> PRT
<213> Homo sapiens

<400> 3538
 Met His Ala His Thr Gly Pro Gly Pro Gly Pro Gln Ser Ser Cys Leu
 1 5 10 15
 Ser Trp Thr Leu Cys Lys His Phe Cys Ala Cys Trp Val Gly Ala Arg
 20 25 30
 Leu Lys Asp Pro Ser Ser Asn Pro Ala Gly Pro Arg Ala Thr Ala Gly
 35 40 45
 Gln Gly Val Ala Pro Gly Phe Arg His Ala Thr Thr Thr Arg Ala Arg
 50 55 60
 Ala Thr His Ala Ser Cys Ala His Leu Thr His Thr Pro Leu Pro Gly
 65 70 75 80
 His Ala Asp Thr Pro Gln Pro His Thr Ser His Ala Val His Leu Arg
 85 90 95
 Leu Leu Thr Ser His Ala Gln Cys Trp Cys Thr Phe Ala Ser His Met

[illegible]

```
<210> 3539
<211> 818
<212> DNA
<213> Homo sapiens
```

```

<400> 3539
ngcgcgccag ggggaagtgc ccagcttggc tctggaagaa ccgagggctc tctgattctg
60
ggcaatgggg gtgcctgtgg tcccagctgc tggggaggct gaggcggaat tgcttgagcg
120
cggggggcgg aggttgcagt gagccgagat cgcgcaggta cgctccagtc tgggcgacaa
180
gagcgaaact cgatatcaaa aaaaaaaaaa acgtcctgat ccagagcct cttcacgcgt
240
cccctaccac agcacttcag agaagcaggt ctttaatcag tgtgtctaga tgcagctgct
300
gactgtcacc cctacccgc ctctctccca gtctgaggac ggccagtcac cccattgcc
360
cagaatcaga cgaccctcgg ttcttcaga gccaagctgg gcaacttccc ctggcaagcc
420
ttcaccagta tccacggcgg tgggggcggg gccctgctgg gggacagatg gatcctcact
480
gtgtcccaca ccgtctaccc caaggacagt gtttctctca ggaagaacca gagtgtgaat
540
gtgttcttgg gccacacagc catagatgag atgctgaaac tggggaacca ccctgtccac
600
cgtgtcgttg tgcacccga ctaccgtcag aatgagtcac ataactttag cggggacatc
660
gccctcctgg agctgcagca cagcatcccc ctggggccca acgtcctccc ggtctgtctg
720
cccgataatg agaccctcta ccgcagcggc ttgttgggct acgtcagtggt gtttggcatg
780
gagatgggct ggctaactac tgagctgaag tactcgag
818

```

```
<210> 3540
<211> 180
<212> PRT
<213> Homo sapiens
```

```

<400> 3540
Ser Val Cys Leu Asp Ala Ala Ala Asp Cys His Pro Tyr Pro Ala Ser
  1             5             10             15
Leu Pro Val Cys Gly Arg Pro Val Thr Pro Ile Ala Gln Asn Gln Thr
      20             25             30
Thr Leu Gly Ser Ser Arg Ala Lys Leu Gly Asn Phe Pro Trp Gln Ala

```

35 40 45
 Phe Thr Ser Ile His Gly Arg Gly Gly Gly Ala Leu Leu Gly Asp Arg
 50 55 60
 Trp Ile Leu Thr Ala Ala His Thr Val Tyr Pro Lys Asp Ser Val Ser
 65 70 75 80
 Leu Arg Lys Asn Gln Ser Val Asn Val Phe Leu Gly His Thr Ala Ile
 85 90 95
 Asp Glu Met Leu Lys Leu Gly Asn His Pro Val His Arg Val Val Val
 100 105 110
 His Pro Asp Tyr Arg Gln Asn Glu Ser His Asn Phe Ser Gly Asp Ile
 115 120 125
 Ala Leu Leu Glu Leu Gln His Ser Ile Pro Leu Gly Pro Asn Val Leu
 130 135 140
 Pro Val Cys Leu Pro Asp Asn Glu Thr Leu Tyr Arg Ser Gly Leu Leu
 145 150 155 160
 Gly Tyr Val Ser Gly Phe Gly Met Glu Met Gly Trp Leu Thr Thr Glu
 165 170 175
 Leu Lys Tyr Ser
 180

<210> 3541

<211> 722

<212> DNA

<213> Homo sapiens

<400> 3541

tctctccgac ggcgtgcagg tggccatttc aagaccgta ctaggtagat ggtcaattag
 60
 agttcccagg gtttgaagcc tgtaactgct gccgccgctc aagccctcca gagcattgct
 120
 acggctgctg cccttgact actacctcca aatacgttct tgctggtagt ggcggcagca
 180
 ggaccaatta cctctttttt gctctccctc gagaagctcc agatggcgctc ttccgtgggc
 240
 aacgtggccg acagcacaga accaacgaaa cgtatgcttt ccttccaagg gttagctgag
 300
 ttggcacatc gagaatatca ggcaggagat tttgaggcag ctgagagaca ctgcatgcag
 360
 ctctggagac aagagccaga caatactggt gtgcttttat tactttcatc tatacacttc
 420
 cagtgtcgaa ggctggacag atctgctcac tttagcactc tggcaattaa acagaacccc
 480
 cttctggcag aagcttatcc gaatttgggg aatgtgtaca aggaaagagg gcagttgcag
 540
 gaggcaattg agcattatcg acatgcattg cgtctcaaac ctgatttcat cgatgggtat
 600
 attaacgctg cagccgcctt ggtagcagcg ggtgacatgg aaggggcagt acaagcttac
 660
 gtctctgcac tccagcctgg gtgacaaagt gaggcctgt ctcaaaaaaa aaaaaaaaaa
 720
 aa
 722

<210> 3542

<211> 153

<212> PRT

<213> Homo sapiens

<400> 3542

```

Met Ala Ser Ser Val Gly Asn Val Ala Asp Ser Thr Glu Pro Thr Lys
 1           5           10           15
Arg Met Leu Ser Phe Gln Gly Leu Ala Glu Leu Ala His Arg Glu Tyr
      20           25           30
Gln Ala Gly Asp Phe Glu Ala Ala Glu Arg His Cys Met Gln Leu Trp
      35           40           45
Arg Gln Glu Pro Asp Asn Thr Gly Val Leu Leu Leu Ser Ser Ile
      50           55           60
His Phe Gln Cys Arg Arg Leu Asp Arg Ser Ala His Phe Ser Thr Leu
      65           70           75           80
Ala Ile Lys Gln Asn Pro Leu Leu Ala Glu Ala Tyr Ser Asn Leu Gly
      85           90           95
Asn Val Tyr Lys Glu Arg Gly Gln Leu Gln Glu Ala Ile Glu His Tyr
      100          105          110
Arg His Ala Leu Arg Leu Lys Pro Asp Phe Ile Asp Gly Tyr Ile Asn
      115          120          125
Ala Ala Ala Ala Leu Val Ala Ala Gly Asp Met Glu Gly Ala Val Gln
      130          135          140
Ala Tyr Val Ser Ala Leu Gln Pro Gly
145          150

```

<210> 3543

<211> 1206

<212> DNA

<213> Homo sapiens

<400> 3543

```

nntcagagtt ttgagttaag agctcaccat ttaatataca aattagtatg tcagaatctc
60
cagctaataga aagtatttta tgaatgctgt ccttaagacc gagtaacagc attgtgttca
120
gtttggttgt tgctcaggat gtgtaatagt ttctcttcag ccataagcca cgcttggtag
180
atattaattg agtggagaga tcttgacact cttccagtta tgcatttggtg gtttgtcgtc
240
tgatttggag cacttgaag atcactgttt tgtgttctac gacccaattg agaggattat
300
gtggagctaa gttttaccaa tcaggatcat ccttccttgt gggttagcag gcagttataa
360
gattgcaaaa tgggtctccg gattcacttt gttgttgacc cacatgggtg gtgctgcatg
420
ggtttgattg tctttgtttg gttatacaat attgttttaa ttcccaaaat tgcctctttt
480
cctcactatg aagaaggaca tattccaggc atattaataa taatattcta tggcatttcc
540
atattctgtc tggttgcctt agtgagggcc tccataactg atccaggaag actccctgag
600
aaccccaaga tcccacatgg agaaaggag ttctgggaat tatgtaacaa gtgtaatttg
660

```

atgagaccaa agcgttccca tcactgtagc cgctgcggcc actgtgtgag gagaatggat
 720
 catcactgtc catggattaa caattgtgtt ggtgaagata atcattggct ctttctgcag
 780
 ttgtgtttct aactgaact tcttacttgc tacgcactga tgttttcttt ctgccactat
 840
 tactattttc ttccactaaa aaagcgtaat ttggacctct ttgttttttag acatgaattg
 900
 gccataatga gactagcagc ctttatgggc attactatgt tagttggaat aactggactc
 960
 ttttacactc aactaattgg catcatcaca ctttgcagtc tcacccact caagtgtggc
 1020
 tctgtatcca acaacagtct tggagatctc atgaagattt ctgaaacttt tgctctgagg
 1080
 ataccttctt ttgtggttat gtgccctgaa aactccagcc tccgtgtctt caattcagt
 1140
 aaactactac tctgcttgga ttccctctt atacaatggc ctaccaagtg actgcaaaca
 1200
 gaaatc
 1206

<210> 3544

<211> 273

<212> PRT

<213> Homo sapiens

<400> 3544

Met	Gly	Leu	Arg	Ile	His	Phe	Val	Val	Asp	Pro	His	Gly	Trp	Cys	Cys
1				5					10					15	
Met	Gly	Leu	Ile	Val	Phe	Val	Trp	Leu	Tyr	Asn	Ile	Val	Leu	Ile	Pro
			20					25					30		
Lys	Ile	Val	Leu	Phe	Pro	His	Tyr	Glu	Glu	Gly	His	Ile	Pro	Gly	Ile
		35					40					45			
Leu	Ile	Ile	Ile	Phe	Tyr	Gly	Ile	Ser	Ile	Phe	Cys	Leu	Val	Ala	Leu
		50				55					60				
Val	Arg	Ala	Ser	Ile	Thr	Asp	Pro	Gly	Arg	Leu	Pro	Glu	Asn	Pro	Lys
65					70				75					80	
Ile	Pro	His	Gly	Glu	Arg	Glu	Phe	Trp	Glu	Leu	Cys	Asn	Lys	Cys	Asn
			85					90						95	
Leu	Met	Arg	Pro	Lys	Arg	Ser	His	His	Cys	Ser	Arg	Cys	Gly	His	Cys
		100						105					110		
Val	Arg	Arg	Met	Asp	His	His	Cys	Pro	Trp	Ile	Asn	Asn	Cys	Val	Gly
		115					120					125			
Glu	Asp	Asn	His	Trp	Leu	Phe	Leu	Gln	Leu	Cys	Phe	Tyr	Thr	Glu	Leu
		130				135					140				
Leu	Thr	Cys	Tyr	Ala	Leu	Met	Phe	Ser	Phe	Cys	His	Tyr	Tyr	Tyr	Phe
145					150					155					160
Leu	Pro	Leu	Lys	Lys	Arg	Asn	Leu	Asp	Leu	Phe	Val	Phe	Arg	His	Glu
			165					170						175	
Leu	Ala	Ile	Met	Arg	Leu	Ala	Ala	Phe	Met	Gly	Ile	Thr	Met	Leu	Val
		180						185					190		
Gly	Ile	Thr	Gly	Leu	Phe	Tyr	Thr	Gln	Leu	Ile	Gly	Ile	Ile	Thr	Pro
		195					200					205			
Cys	Ser	Leu	Ile	Leu	Leu	Lys	Cys	Gly	Ser	Val	Ser	Asn	Asn	Ser	Leu

210	215	220
Gly Asp Leu Met Lys Ile Ser Glu Thr Phe Ala Leu Arg Ile Pro Ser		
225	230	235
Phe Val Val Met Cys Pro Glu Asn Ser Ser Leu Arg Val Phe Asn Ser		240
	245	250
Val Lys Leu Leu Leu Cys Leu Asp Ser Pro Leu Ile Gln Trp Ser Thr		255
	260	265
		270

Lys

<210> 3545

<211> 3657

<212> DNA

<213> Homo sapiens

<400> 3545

```

cctaggtgtg tggagactga gtgagtgaat gtgtggagag tactaggctt ggcacaggcc
60
agagcagggtg ctcaggaggt ctggcccatc atctggctcc ggctgaccct tgccctcacc
120
ctggcagacc ctggctgggc atccatcagc aggggtgtgc tgggtgtgtga cgagtgtgtc
180
agcgtgcacc ggagcctggg acgccacatc tccattgtca agcaccttcg ccacagcgcc
240
tggctcccca cgctgctgca gatgggtgcac acgcttgcca gcaacggggc caactccatc
300
tgggagcact ccctgctgga ccccgacaaa gtgcagagcg gccggcgtaa agccaacccc
360
caagacaaaag tccaccccat caagtcagag ttcacagagg ccaagtacca gatgctggca
420
tttgtgcaca agcttccctg ccgggacgat gatggagtca ccgccaaga cctcagcaag
480
caactacact cgagcgtgcg gacaggcaac ctggagacat gtctgcgcct gctctccctg
540
ggtgcccagg ccaacttctt ccaccagag aagggcacca cacctctgca cgtggctgcc
600
aaggcaggac agacactgca ggccgagctg cttgtagtgt atggggctga ccctggctcc
660
cctgatgtta atggccgcac acccattgac tatgccaggc aggcggggca ccatgagctg
720
gcggaaggc tggttgagtg ccaatatgag ctactgacc ggctggcctt ctacctctgt
780
ggacgcaagc cggatcacia gaatgggcat tacatcatcc cacagatggc tgacagatct
840
cggcaaaagt gcatgtctca gagccttgac ttatccgaat tggccaaagc tgctaagaag
900
aagctgcagg cgctcagcaa ccggcttttt gaggaactcg ccatggacgt gtatgacgag
960
gtggatcgaa gagaaaatga tgcagtgtgg ctggctaccc aaaaccacag cactctgggtg
1020
acagagcgca gtgctgtgcc cttcctgcct gttaaccggg aatactcagc cagcggaat
1080
caggggagac aaaagctggc ccgctttaat gcccagagat ttgccacctt gatcatcgac
1140

```

attctcagtg aggccaaagcg gagacagcag ggcaagagcc tgagcagccc cacagacaac
 1200
 ctcgagctgt ctctgcggag ccagagtgc ctcgacgacc aacacgacta cgacagcgtg
 1260
 gcctctgacg aggacacaga ccaggagccc ctgcgcagca cgggcgccac tcggagcaac
 1320
 cgggcccggg gcatggactc ctccgacttg tctgacgggg ctgtgacgct gcaggagtac
 1380
 ctggagctga agaaggccct ggctacatcg gaggcaaagg tgcagcagct catgaaggtc
 1440
 aacagtagcc tgagcgacga gctccggagg ctgcagcgag agcactttgc acccataatc
 1500
 cacaagctgc aggcggagaa cctgcagctc cggcagcctc caggggccggt gccacacct
 1560
 ccactcccca gtgaacgggc ggaacacaca cccatggcgc caggcgggag cacacaccgc
 1620
 agggatcgcc aggccttttc catgtatgaa cctggctctg ccctgaagcc ctttgggggc
 1680
 cccctggggg acgagctcac tacgcggctg cagcctttcc acagcactga gctagaggac
 1740
 gacgccatct attcagtgc cgtccctgct ggccctttacc ggatccggaa aggggtgtct
 1800
 gcctcagctg tgcccttcac tccctcctcc ccgctgctgt cctgctccca ggagggaagc
 1860
 cgccacacga gcaagctttc ccgccacggc agtggagccg acagtgacta tgagaacacg
 1920
 caaagtgggg acccactgct ggggctggaa gggaagaggt ttctagagct gggcaaagag
 1980
 gaagacttcc acccagagct ggaaagcctg gatggagacc tagatcctgg gcttcccagc
 2040
 acagaggatg tcattcttga gacagagcag gtcaccaaga acattcagga actgttgagg
 2100
 gcagcccagg agttcaagca tgacagcttc gtgccctgct cagagaagat ccatttggtc
 2160
 gtgaccgaga tggcctccct cttcccaaag aggccagccc tggagccagt gcggagctca
 2220
 ctgcggctgc tcaacgccag cgctaccgg ctgcagagtg agtgccggaa gacagtgcgc
 2280
 ccagagcccc gcgccccagt ggacttccag ctgctgactc agcaggtgat ccagtgcgc
 2340
 tatgacatcg ccaaggctgc caagcagctg gtcaccatca ccaccgaga gaagaagcag
 2400
 tgacctctct cccacacccc tcacctgcac cctaggacct cactggccat aggagctggg
 2460
 ccactccaga cattaatccc caccacaaca gagccactgg cacaagtgc cttagtgtg
 2520
 ccactccc tggcagccag gtgccctggt gccacccct gtgcagcccc taaggatggg
 2580
 gaggtggggg ggcaggagct tctgtcccc acattccatg cacctcccct ctgtatatag
 2640
 catctcccc ctcctagtga gcaggggct gcaaggcatc actcccagcc cctgccttc
 2700
 tagggcacc tcagcaaagg ggcaggtggg gacactccaa gtggggcagc tctccgtaca
 2760

tgcgccccac ccccatgagc cagttcagcc ctactggggg ctgagcgggg gcatccccctc
 2820
 ctttgtacat agtctccatg gatgtccctg ccctgtagcc accagcccct tgetgtctctc
 2880
 cctttaatgc catatggccc ctgcctaggg cacaggcccc aacctgtgtg ctgggggtccc
 2940
 cagcagcaaa cactggaaag tctgtttttt tttttctttc ttcttcccca ccccttaatt
 3000
 ttaactttgt ggtaactgag tgcccccgcg tgccctgcgtg ttgagtgtgt gggcggcagt
 3060
 gccgttccgg aggccctggc catctggagt tttgaggggt gaggggacca gagcagtggg
 3120
 accagcatgg ggatcagctt cccttcccca cctgggagcc agggactgtc cgggtagcca
 3180
 gttttgggtc tgccagctgc ctccctgate cctccccact ctgcgccctt ctctatgaac
 3240
 ttaaatcaaa aaccacttcc ctccatctcc tctgtctcct gcgtggaggg ggaatgtgtg
 3300
 ctggctaggg tggaggactg agcacctgag cctggggctg gctccccggg gtccccgact
 3360
 cagctgggtg ctgtggagct gagtcccctc cccgtaacct ctgcaaggcc agcaccacc
 3420
 atcactacct gcacctgctg tgggtcccacc ctctggaggg ctgggaaacct ggctgcagcc
 3480
 tgggaaggct ggagaggcag acggtgggac ccaccagctc tctccccatc ccgtttcttc
 3540
 cctggggggc aggccttacc tgtgtggtgg tgggtgggct gtcaagacgt gtcattgtaca
 3600
 tttgtatcaa aaataaagaa gtgaccatga aaaaaaaaaa aaaaaaaga ttttaat
 3657

<210> 3546

<211> 792

<212> PRT

<213> Homo sapiens

<400> 3546

Val	Asn	Val	Trp	Arg	Val	Leu	Gly	Leu	Ala	Gln	Ala	Arg	Ala	Gly	Ala
1			5					10						15	
Gln	Glu	Val	Trp	Pro	Ile	Ile	Trp	Leu	Arg	Leu	Thr	Leu	Ala	Leu	Thr
		20					25					30			
Leu	Ala	Asp	Pro	Gly	Trp	Ala	Ser	Ile	Ser	Arg	Gly	Val	Leu	Val	Cys
	35					40					45				
Asp	Glu	Cys	Cys	Ser	Val	His	Arg	Ser	Leu	Gly	Arg	His	Ile	Ser	Ile
	50				55					60					
Val	Lys	His	Leu	Arg	His	Ser	Ala	Trp	Pro	Pro	Thr	Leu	Leu	Gln	Met
65				70					75					80	
Val	His	Thr	Leu	Ala	Ser	Asn	Gly	Ala	Asn	Ser	Ile	Trp	Glu	His	Ser
		85					90						95		
Leu	Leu	Asp	Pro	Ala	Gln	Val	Gln	Ser	Gly	Arg	Arg	Lys	Ala	Asn	Pro
		100					105					110			
Gln	Asp	Lys	Val	His	Pro	Ile	Lys	Ser	Glu	Phe	Ile	Arg	Ala	Lys	Tyr
	115					120					125				
Gln	Met	Leu	Ala	Phe	Val	His	Lys	Leu	Pro	Cys	Arg	Asp	Asp	Asp	Gly

	130				135				140							
Val	Thr	Ala	Lys	Asp	Leu	Ser	Lys	Gln	Leu	His	Ser	Ser	Val	Arg	Thr	
145					150					155					160	
Gly	Asn	Leu	Glu	Thr	Cys	Leu	Arg	Leu	Leu	Ser	Leu	Gly	Ala	Gln	Ala	
				165					170					175		
Asn	Phe	Phe	His	Pro	Glu	Lys	Gly	Thr	Thr	Pro	Leu	His	Val	Ala	Ala	
			180					185					190			
Lys	Ala	Gly	Gln	Thr	Leu	Gln	Ala	Glu	Leu	Leu	Val	Val	Tyr	Gly	Ala	
		195					200					205				
Asp	Pro	Gly	Ser	Pro	Asp	Val	Asn	Gly	Arg	Thr	Pro	Ile	Asp	Tyr	Ala	
	210					215					220					
Arg	Gln	Ala	Gly	His	His	Glu	Leu	Ala	Glu	Arg	Leu	Val	Glu	Cys	Gln	
225					230					235					240	
Tyr	Glu	Leu	Thr	Asp	Arg	Leu	Ala	Phe	Tyr	Leu	Cys	Gly	Arg	Lys	Pro	
			245						250					255		
Asp	His	Lys	Asn	Gly	His	Tyr	Ile	Ile	Pro	Gln	Met	Ala	Asp	Arg	Ser	
			260				265						270			
Arg	Gln	Lys	Cys	Met	Ser	Gln	Ser	Leu	Asp	Leu	Ser	Glu	Leu	Ala	Lys	
		275					280					285				
Ala	Ala	Lys	Lys	Lys	Leu	Gln	Ala	Leu	Ser	Asn	Arg	Leu	Phe	Glu	Glu	
	290					295					300					
Leu	Ala	Met	Asp	Val	Tyr	Asp	Glu	Val	Asp	Arg	Arg	Glu	Asn	Asp	Ala	
305					310					315					320	
Val	Trp	Leu	Ala	Thr	Gln	Asn	His	Ser	Thr	Leu	Val	Thr	Glu	Arg	Ser	
			325						330					335		
Ala	Val	Pro	Phe	Leu	Pro	Val	Asn	Pro	Glu	Tyr	Ser	Ala	Thr	Arg	Asn	
			340					345					350			
Gln	Gly	Arg	Gln	Lys	Leu	Ala	Arg	Phe	Asn	Ala	Arg	Glu	Phe	Ala	Thr	
		355					360					365				
Leu	Ile	Ile	Asp	Ile	Leu	Ser	Glu	Ala	Lys	Arg	Arg	Gln	Gln	Gly	Lys	
	370					375					380					
Ser	Leu	Ser	Ser	Pro	Thr	Asp	Asn	Leu	Glu	Leu	Ser	Leu	Arg	Ser	Gln	
385				390						395					400	
Ser	Asp	Leu	Asp	Asp	Gln	His	Asp	Tyr	Asp	Ser	Val	Ala	Ser	Asp	Glu	
			405						410					415		
Asp	Thr	Asp	Gln	Glu	Pro	Leu	Arg	Ser	Thr	Gly	Ala	Thr	Arg	Ser	Asn	
			420					425					430			
Arg	Ala	Arg	Ser	Met	Asp	Ser	Ser	Asp	Leu	Ser	Asp	Gly	Ala	Val	Thr	
		435					440					445				
Leu	Gln	Glu	Tyr	Leu	Glu	Leu	Lys	Lys	Ala	Leu	Ala	Thr	Ser	Glu	Ala	
	450					455					460					
Lys	Val	Gln	Gln	Leu	Met	Lys	Val	Asn	Ser	Ser	Leu	Ser	Asp	Glu	Leu	
465				470												

														565								570						575		
Ser	Val	His	Val	Pro	Ala	Gly	Leu	Tyr	Arg	Ile	Arg	Lys	Gly	Val	Ser															
				580							585			590																
Ala	Ser	Ala	Val	Pro	Phe	Thr	Pro	Ser	Ser	Pro	Leu	Leu	Ser	Cys	Ser															
				595							600			605																
Gln	Glu	Gly	Ser	Arg	His	Thr	Ser	Lys	Leu	Ser	Arg	His	Gly	Ser	Gly															
				610							615			620																
Ala	Asp	Ser	Asp	Tyr	Glu	Asn	Thr	Gln	Ser	Gly	Asp	Pro	Leu	Leu	Gly															
625					630							635			640															
Leu	Glu	Gly	Lys	Arg	Phe	Leu	Glu	Leu	Gly	Lys	Glu	Glu	Asp	Phe	His															
				645							650			655																
Pro	Glu	Leu	Glu	Ser	Leu	Asp	Gly	Asp	Leu	Asp	Pro	Gly	Leu	Pro	Ser															
				660							665			670																
Thr	Glu	Asp	Val	Ile	Leu	Lys	Thr	Glu	Gln	Val	Thr	Lys	Asn	Ile	Gln															
				675							680			685																
Glu	Leu	Leu	Arg	Ala	Ala	Gln	Glu	Phe	Lys	His	Asp	Ser	Phe	Val	Pro															
				690							695			700																
Cys	Ser	Glu	Lys	Ile	His	Leu	Ala	Val	Thr	Glu	Met	Ala	Ser	Leu	Phe															
705					710							715			720															
Pro	Lys	Arg	Pro	Ala	Leu	Glu	Pro	Val	Arg	Ser	Ser	Leu	Arg	Leu	Leu															
				725							730			735																
Asn	Ala	Ser	Ala	Tyr	Arg	Leu	Gln	Ser	Glu	Cys	Arg	Lys	Thr	Val	Pro															
				740							745			750																
Pro	Glu	Pro	Gly	Ala	Pro	Val	Asp	Phe	Gln	Leu	Leu	Thr	Gln	Gln	Val															
				755							760			765																
Ile	Gln	Cys	Ala	Tyr	Asp	Ile	Ala	Lys	Ala	Ala	Lys	Gln	Leu	Val	Thr															
				770							775			780																
Ile	Thr	Thr	Arg	Glu	Lys	Lys	Gln																							
785					790																									

<210> 3547

<211> 1039

<212> DNA

<213> Homo sapiens

<400> 3547

```

agatctcaga aaatagttta tatttggtgt ggagaagatc atactgctgc tctaaccaag
60
gaagggtggag tgtttacttt tggagctgga gggatatggtc agttgggcca taattctacc
120
agtcatgaaa taaacccaag gaaagttttt gaacttatgg gaagcattgt cactgagatt
180
gcttggtggac ggcagcacac ttctgctttt gttccttcat caggacgaat ttactctttt
240
gggcttggtg gtaatgggca gctgggaacc ggttcaacaa gcaacaggaa aagccccctt
300
actgtaaaag gaaattggta cccctataat gggcagtgtc taccagatat tgattctgaa
360
gaatatttct gtgtaaaaag aattttctca gggggagatc aaagcttttc acattactct
420
agtccccaga actgtgggcc accagatgac ttcagatgtc ccaatccgac aaagcagatc
480
tggacagtga atgaagctct aattcagaaa tggctgagct atccttcttg aagggtttcct
540

```

gtggagatag ccaatgagat agatggaacg ttttcttcct ctggttgccct aaatggaagt
600
tttttagctg ttagcaatga tgatcactat agaacaggta ccagattttc aggggttgat
660
atgaatgctg ctaggctttt attccacaaa cttatacaac ctgatcatcc gcagatatct
720
cagcaggtgg cagctagttt ggaaaagaat cttattccta aactgactag ctccttacct
780
gatgttgaag cattgaggtt ttatcttact ctaccagaat gtcccctgat gagtgattcc
840
aacaatttca taacaatagc aattcccttt ggtacagctc ttgtgaacct agaaaaggca
900
ccactgaaag tacttgaaaa ctggtggtca gtacttgaac ctccactatt cctcaagata
960
gtagaacttt ttaaggaagt tgtggtacat cttttgaaac tctacaagat cggtattccc
1020
ccttctgaaa gaataatta
1039

<210> 3548

<211> 346

<212> PRT

<213> Homo sapiens

<400> 3548

Arg	Ser	Gln	Lys	Ile	Val	Tyr	Ile	Cys	Cys	Gly	Glu	Asp	His	Thr	Ala
1				5				10						15	
Ala	Leu	Thr	Lys	Glu	Gly	Gly	Val	Phe	Thr	Phe	Gly	Ala	Gly	Gly	Tyr
			20					25					30		
Gly	Gln	Leu	Gly	His	Asn	Ser	Thr	Ser	His	Glu	Ile	Asn	Pro	Arg	Lys
		35					40					45			
Val	Phe	Glu	Leu	Met	Gly	Ser	Ile	Val	Thr	Glu	Ile	Ala	Cys	Gly	Arg
	50					55					60				
Gln	His	Thr	Ser	Ala	Phe	Val	Pro	Ser	Ser	Gly	Arg	Ile	Tyr	Ser	Phe
65					70					75				80	
Gly	Leu	Gly	Gly	Asn	Gly	Gln	Leu	Gly	Thr	Gly	Ser	Thr	Ser	Asn	Arg
				85				90						95	
Lys	Ser	Pro	Phe	Thr	Val	Lys	Gly	Asn	Trp	Tyr	Pro	Tyr	Asn	Gly	Gln
		100					105						110		
Cys	Leu	Pro	Asp	Ile	Asp	Ser	Glu	Glu	Tyr	Phe	Cys	Val	Lys	Arg	Ile
	115					120						125			
Phe	Ser	Gly	Gly	Asp	Gln	Ser	Phe	Ser	His	Tyr	Ser	Ser	Pro	Gln	Asn
	130				135						140				
Cys	Gly	Pro	Pro	Asp	Asp	Phe	Arg	Cys	Pro	Asn	Pro	Thr	Lys	Gln	Ile
145				150						155				160	
Trp	Thr	Val	Asn	Glu	Ala	Leu	Ile	Gln	Lys	Trp	Leu	Ser	Tyr	Pro	Ser
			165					170						175	
Gly	Arg	Phe	Pro	Val	Glu	Ile	Ala	Asn	Glu	Ile	Asp	Gly	Thr	Phe	Ser
		180					185						190		
Ser	Ser	Gly	Cys	Leu	Asn	Gly	Ser	Phe	Leu	Ala	Val	Ser	Asn	Asp	Asp
	195					200						205			
His	Tyr	Arg	Thr	Gly	Thr	Arg	Phe	Ser	Gly	Val	Asp	Met	Asn	Ala	Ala
	210				215						220				
Arg	Leu	Leu	Phe	His	Lys	Leu	Ile	Gln	Pro	Asp	His	Pro	Gln	Ile	Ser

225		230		235		240									
Gln	Gln	Val	Ala	Ala	Ser	Leu	Glu	Lys	Asn	Leu	Ile	Pro	Lys	Leu	Thr
			245						250					255	
Ser	Ser	Leu	Pro	Asp	Val	Glu	Ala	Leu	Arg	Phe	Tyr	Leu	Thr	Leu	Pro
			260						265					270	
Glu	Cys	Pro	Leu	Met	Ser	Asp	Ser	Asn	Asn	Phe	Ile	Thr	Ile	Ala	Ile
			275						280					285	
Pro	Phe	Gly	Thr	Ala	Leu	Val	Asn	Leu	Glu	Lys	Ala	Pro	Leu	Lys	Val
			290						295					300	
Leu	Glu	Asn	Trp	Trp	Ser	Val	Leu	Glu	Pro	Pro	Leu	Phe	Leu	Lys	Ile
305						310					315				320
Val	Glu	Leu	Phe	Lys	Glu	Val	Val	Val	His	Leu	Leu	Lys	Leu	Tyr	Lys
				325					330						335
Ile	Gly	Ile	Pro	Pro	Ser	Glu	Arg	Ile	Ile						
			340						345						

<210> 3549

<211> 2542

<212> DNA

<213> Homo sapiens

<400> 3549

```

caaacatcag aatcgattaa aaaaagtga gaaaagaagc gaataagttc caagagtcca
60
ggacatatgg taataactaga ccaaactaaa ggagatcatt gtagaccatc aagaagagga
120
agatatgaga aaattcatgg aagaagtaag gaaaaggaga gagctagtct agataaaaaa
180
agagataaag actacagaag gaaagagatc ttgccttttg aaaagatgaa ggaacaaagg
240
ttgagagaac atttagttcg ttttgaaagg ctgcgacgag caatggaact tcgaagacga
300
agagagattg cagagagaga gcgtcgagag cgagaacgca ttagaataat tcgtgaacgg
360
gaagaacggg aacgcttaca gagagagaga gagcgcttag aaattgaaag gcaaaaacta
420
gagagagaga gaatggaacg cgaacgcttg gaaagggaaac gcattcgtat tgaacaggaa
480
cgtcgtaagg aagctgaacg gattgctcga gaaagagagg aactcagaag gcaacaacag
540
cagcttcggt atgaacaaga aaaaaggaat tccttgaaac gccacgtga ttagatcat
600
aggcgagatg atccttactg gagcgagaat aaaaagttgt ctctagatac agatgcacga
660
tttgccatg gatccgacta ctctcgccaa cagaacagat ttaatgactt tgatcaccga
720
gagaggggca ggtttcctga gagttcagca gtacagtctt catcttttga aaggcgggat
780
cgctttgttg gtcaaagtga ggggaaaaaa gcacgaccta ctgcacgaag ggaagatcca
840
agcttcgaaa gatatcccaa aaatttcagt gactccagaa gaaatgagcc tccaccacca
900
agaaatgaac ttagagaatc agacaggcga gaagtacgag gggagcgaga cgaaaggaga
960

```

acgggtgatta ttcatgacag gcctgatata actcatccta gacatcctcg agaggcaggg
1020
cccaatcctt ccagaccac cagctggaaa agtgatggaa gcatgtccac tgacaaacgg
1080
gaaacaagag ttgaaaggcc agaacgatct gggagagaag tatcaggga cagtgtgaga
1140
ggcgctcccc ctgggaatcg tagcagcgct tcgggggtacg ggagcagaga gggagacaga
1200
ggagtcata cagaccgagg aggtggatca cagcactatc ctgaggagcg acatgtggtt
1260
gaacgccatg gacgggacac aagcggacca aggaaagagt ggcattggtcc accctctcaa
1320
gggcctagct atcatgatac gaggcgaatg ggtgacggcc gggcaggagc aggcattgata
1380
acccaacatt caagtaacgc atccccaatt aatagaattg taaaaatcag tggcaattcc
1440
atgccaagag gaagtggctc cggatttaag ccatttaagg gtggacctcc gcgacgattc
1500
tgaaaatgag ctctctgcca aggttttaag ataatttatt gaaatctcct gtaaacctta
1560
cttgactact tatgaagagg acctctgact tgcttgagag ttctgtcaga cttttctttt
1620
taaaaattta acatgattgc tttctcaat tttggagaag atgtttaaat agttctgttg
1680
taacttttaa tagttttgtg tatcattcaa ctttttttct tgcagcaccg aggcacattt
1740
gaaaagatgg aattgaagtc gttttgttta acgctgtgtg aatataaaga gtagtttgca
1800
gctgtgtggt agtggtttaa tttgcagcct tagctctgtg gtgtctggct ctagagttac
1860
ttctttttac caagcatttt cagcctccat tttgaaggct gtctacactt aagaagtctt
1920
agctgtctaa tttttagaga ataagattgt tcattgcatt tctgagtatt atgtaacctt
1980
tttttgcaga aggtactgtt acattaagtg catctgtgta tcttggttta aaaaaatgta
2040
atcttttttg aaataaacct tcatattctg tatagttgct aaagtgttga gaacctttt
2100
aattgtaaaa tgagaaccga ttttcagttt agtgtagcag cacacttggt caggtttgca
2160
tggtatgaaa ccaaatagat tcatgaaacc ttggccatga ggtttgttc acaaggttct
2220
tagaccgagt tgtgcaggta agtgcacttt taggtaatct gcactgtttg tttgatggat
2280
aaattccatc tctgggaatt gtgtgggtat taatgtttcc atgttcccaa ctatgttgag
2340
aagtggaaaa aaaccaggt tctagatggg tgaatcagtt gggttttgta aatacttgta
2400
tgtggggaag acattgttgt ctttttgta aaataaaaaat ccacacctgg aaaaaaaaaa
2460
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2520
aaaaaaaaaa aaaaaaaaaa aa
2542

<210> 3550

<211> 500

<212> PRT

<213> Homo sapiens

<400> 3550

Gln Thr Ser Glu Ser Ile Lys Lys Ser Glu Glu Lys Lys Arg Ile Ser
 1 5 10 15
 Ser Lys Ser Pro Gly His Met Val Ile Leu Asp Gln Thr Lys Gly Asp
 20 25 30
 His Cys Arg Pro Ser Arg Arg Gly Arg Tyr Glu Lys Ile His Gly Arg
 35 40 45
 Ser Lys Glu Lys Glu Arg Ala Ser Leu Asp Lys Lys Arg Asp Lys Asp
 50 55 60
 Tyr Arg Arg Lys Glu Ile Leu Pro Phe Glu Lys Met Lys Glu Gln Arg
 65 70 75 80
 Leu Arg Glu His Leu Val Arg Phe Glu Arg Leu Arg Arg Ala Met Glu
 85 90 95
 Leu Arg Arg Arg Arg Glu Ile Ala Glu Arg Glu Arg Arg Glu Arg Glu
 100 105 110
 Arg Ile Arg Ile Ile Arg Glu Arg Glu Glu Arg Glu Arg Leu Gln Arg
 115 120 125
 Glu Arg Glu Arg Leu Glu Ile Glu Arg Gln Lys Leu Glu Arg Glu Arg
 130 135 140
 Met Glu Arg Glu Arg Leu Glu Arg Glu Arg Ile Arg Ile Glu Gln Glu
 145 150 155 160
 Arg Arg Lys Glu Ala Glu Arg Ile Ala Arg Glu Arg Glu Glu Leu Arg
 165 170 175
 Arg Gln Gln Gln Gln Leu Arg Tyr Glu Gln Glu Lys Arg Asn Ser Leu
 180 185 190
 Lys Arg Pro Arg Asp Val Asp His Arg Arg Asp Asp Pro Tyr Trp Ser
 195 200 205
 Glu Asn Lys Lys Leu Ser Leu Asp Thr Asp Ala Arg Phe Gly His Gly
 210 215 220
 Ser Asp Tyr Ser Arg Gln Gln Asn Arg Phe Asn Asp Phe Asp His Arg
 225 230 235 240
 Glu Arg Gly Arg Phe Pro Glu Ser Ser Ala Val Gln Ser Ser Ser Phe
 245 250 255
 Glu Arg Arg Asp Arg Phe Val Gly Gln Ser Glu Gly Lys Lys Ala Arg
 260 265 270
 Pro Thr Ala Arg Arg Glu Asp Pro Ser Phe Glu Arg Tyr Pro Lys Asn
 275 280 285
 Phe Ser Asp Ser Arg Arg Asn Glu Pro Pro Pro Pro Arg Asn Glu Leu
 290 295 300
 Arg Glu Ser Asp Arg Arg Glu Val Arg Gly Glu Arg Asp Glu Arg Arg
 305 310 315 320
 Thr Val Ile Ile His Asp Arg Pro Asp Ile Thr His Pro Arg His Pro
 325 330 335
 Arg Glu Ala Gly Pro Asn Pro Ser Arg Pro Thr Ser Trp Lys Ser Asp
 340 345 350
 Gly Ser Met Ser Thr Asp Lys Arg Glu Thr Arg Val Glu Arg Pro Glu
 355 360 365
 Arg Ser Gly Arg Glu Val Ser Gly His Ser Val Arg Gly Ala Pro Pro

370		375		380
Gly Asn Arg Ser Ser	Ala Ser Gly Tyr Gly	Ser Arg Glu Gly Asp Arg		
385	390	395	400	
Gly Val Ile Thr Asp	Arg Gly Gly Gly Ser	Gln His Tyr Pro Glu Glu		
	405	410	415	
Arg His Val Val Glu	Arg His Gly Arg Asp	Thr Ser Gly Pro Arg Lys		
	420	425	430	
Glu Trp His Gly Pro	Pro Ser Gln Gly Pro	Ser Tyr His Asp Thr Arg		
	435	440	445	
Arg Met Gly Asp Gly	Arg Ala Gly Met Ile	Thr Gln His Ser		
	450	455	460	
Ser Asn Ala Ser Pro	Ile Asn Arg Ile Val	Gln Ile Ser Gly Asn Ser		
465	470	475	480	
Met Pro Arg Gly Ser	Gly Ser Gly Phe Lys	Pro Phe Lys Gly Gly Pro		
	485	490	495	
Pro Arg Arg Phe				
500				

<210> 3551
 <211> 545
 <212> DNA
 <213> Homo sapiens

<400> 3551
 nattcggcac gaggtaaagt ctattagaat ttgctagtaa aatttaaaaa ggtatgtgac
 60
 atttcttaag ataattgaga aagataaact tctttttcag gaggggtccat cttcctgcca
 120
 tttcttgtga ctggctataa attccatgca gtgctggaat gtgcttctca cagtttagagt
 180
 gctgagcacc tgttttatct cacactccct tgattcctgg ggtaaatccc atctccgcag
 240
 catgggctcc agttaaattc attagtggtc cagatgtgtg tccctgtca gctggccaag
 300
 taaccccact gtttatcgac aggttctcag gaatcagata gctcgcagtc ggccaagaag
 360
 gacatgctgg ctgccttgaa gtccaggcag gaagctctgg aggaaaccct gcgtcagagg
 420
 ctggaggaac tgaagaagct gtgtctccga gaagctgtaa gcctttccta gtcacatccc
 480
 ttgaaattgg tgttgtctgt gatgtcactg atctttctga tgtcatttga tctttttgat
 540
 gtcac
 545

<210> 3552
 <211> 55
 <212> PRT
 <213> Homo sapiens

<400> 3552
 Pro His Cys Leu Ser Thr Gly Ser Gln Glu Ser Asp Ser Ser Gln Ser
 1 5 10 15
 Ala Lys Lys Asp Met Leu Ala Ala Leu Lys Ser Arg Gln Glu Ala Leu

	20		25		30										
Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu	Cys	Leu
	35		40		45										
Arg	Glu	Ala	Val	Ser	Leu	Ser									
50					55										

<210> 3553

<211> 1412

<212> DNA

<213> Homo sapiens

<400> 3553

tacacagtga ctatggatgt gcattccagg tacagaactg aggcccatca ggatgtggtg
 60
 ggaagattta atgaaagggt tattctgtct ctggcctctt gtaagaagtg tctcgtcatt
 120
 gatgaccagc tcaacatcct gcccatctcc tcccacgttg ccaccatgga ggccctgcct
 180
 cccagactc cggatgagag tcttggctct tctgatctgg agctgaggga gttgaaggag
 240
 agcttgcagg acaccagcc tgtgggtgtg ttggtggact gctgtaagac tctagaccag
 300
 gccaaagctg tcttgaaatt tatcgagggc atctctgaaa agaccctgag gagtactgtt
 360
 gcactcacag ctgctcgagg acggggaaaa tctgcagccc tgggattggc gattgctggg
 420
 gcggtggcat ttgggtactc caatatcttt gttacctccc caagccctga taacctccat
 480
 actctgtttg aatttgtatt taaaggattt gatgctctgc aatatcagga acatctggat
 540
 tatgagatta tccagtctct aaatcctgaa tttaacaaag cagtgatcat agtgaatgta
 600
 ttctgagAAC acaggcagac tattcagtat atacatcctg cagatgctgt gaagctgggc
 660
 caggctgaac tagttgtgat tgatgaagct gccgccatcc cctccccctt ggtgaagagc
 720
 ctacttggcc cctaccttgt ttcatggca tccaccatca atggctatga gggcactggc
 780
 cggtcactgt cctcaagct aattcagcag ctccgtcaac agagcgcca gagccaggtc
 840
 agcaccactg ctgagaataa gaccacgacg acagccagat tggcatcagc gcggacactg
 900
 catgagggtt cctccagga gtcaatccga tacgcccctg gggatgcagt ggagaagtgg
 960
 ctgaatgact tgctgtgcct ggattgcctc aacatcactc ggatagtctc aggctgcccc
 1020
 ttgctgaag cttgtgaact gtactatgtt aatagagata cctctttttg ctaccacaag
 1080
 gcctctgaag ttttctcca acggcttatg gccctctacg tggcttctca ctacaagaac
 1140
 tctccaatg atctccagat gctctccgat gcaccttctc accatctctt ctgccttctg
 1200
 cctcctgtgc cccccacca gaatgccctt ccaaaagtgc ttgctgttat ccaggatatg
 1260

gaacagagggc gtccttgtgg cagtgtattg ggggaaccact gaggcattcag gaattagtgg
 1320
 cttaataact gcattgtggg agttttgaaa ctgtggagtc ctggtctgga accaaggggc
 1380
 tgggtctgct gagacagggtg actagggtgc ac
 1412

<210> 3554

<211> 419

<212> PRT

<213> Homo sapiens

<400> 3554

Tyr	Thr	Val	Thr	Met	Asp	Val	His	Ser	Arg	Tyr	Arg	Thr	Glu	Ala	His
1				5					10					15	
Gln	Asp	Val	Val	Gly	Arg	Phe	Asn	Glu	Arg	Phe	Ile	Leu	Ser	Leu	Ala
		20						25					30		
Ser	Cys	Lys	Lys	Cys	Leu	Val	Ile	Asp	Asp	Gln	Leu	Asn	Ile	Leu	Pro
	35						40					45			
Ile	Ser	Ser	His	Val	Ala	Thr	Met	Glu	Ala	Leu	Pro	Pro	Gln	Thr	Pro
	50					55					60				
Asp	Glu	Ser	Leu	Gly	Pro	Ser	Asp	Leu	Glu	Leu	Arg	Glu	Leu	Lys	Glu
65					70					75				80	
Ser	Leu	Gln	Asp	Thr	Gln	Pro	Val	Gly	Val	Leu	Val	Asp	Cys	Cys	Lys
			85					90					95		
Thr	Leu	Asp	Gln	Ala	Lys	Ala	Val	Leu	Lys	Phe	Ile	Glu	Gly	Ile	Ser
		100						105					110		
Glu	Lys	Thr	Leu	Arg	Ser	Thr	Val	Ala	Leu	Thr	Ala	Ala	Arg	Gly	Arg
		115					120						125		
Gly	Lys	Ser	Ala	Ala	Leu	Gly	Leu	Ala	Ile	Ala	Gly	Ala	Val	Ala	Phe
	130					135					140				
Gly	Tyr	Ser	Asn	Ile	Phe	Val	Thr	Ser	Pro	Ser	Pro	Asp	Asn	Leu	His
145					150					155				160	
Thr	Leu	Phe	Glu	Phe	Val	Phe	Lys	Gly	Phe	Asp	Ala	Leu	Gln	Tyr	Gln
			165					170					175		
Glu	His	Leu	Asp	Tyr	Glu	Ile	Ile	Gln	Ser	Leu	Asn	Pro	Glu	Phe	Asn
		180						185					190		
Lys	Ala	Val	Ile	Ile	Val	Asn	Val	Phe	Arg	Glu	His	Arg	Gln	Thr	Ile
	195					200						205			
Gln	Tyr	Ile	His	Pro	Ala	Asp	Ala	Val	Lys	Leu	Gly	Gln	Ala	Glu	Leu
	210					215					220				
Val	Val	Ile	Asp	Glu	Ala	Ala	Ala	Ile	Pro	Leu	Pro	Leu	Val	Lys	Ser
225				230						235				240	
Leu	Leu	Gly	Pro	Tyr	Leu	Val	Phe	Met	Ala	Ser	Thr	Ile	Asn	Gly	Tyr
			245					250					255		
Glu	Gly	Thr	Gly	Arg	Ser	Leu	Ser	Leu	Lys	Leu	Ile	Gln	Gln	Leu	Arg
		260						265					270		
Gln	Gln	Ser	Ala	Gln	Ser	Gln	Val	Ser	Thr	Thr	Ala	Glu	Asn	Lys	Thr
		275					280					285			
Thr	Thr	Thr	Ala	Arg	Leu	Ala	Ser	Ala	Arg	Thr	Leu	His	Glu	Val	Ser
	290					295					300				
Leu	Gln	Glu	Ser	Ile	Arg	Tyr	Ala	Pro	Gly	Asp	Ala	Val	Glu	Lys	Trp
305					310					315				320	
Leu	Asn	Asp	Leu	Leu	Cys	Leu	Asp	Cys	Leu	Asn	Ile	Thr	Arg	Ile	Val

[illegible]

```
<210> 3555
<211> 1038
<212> DNA
<213> Homo sapiens
```

```

<400> 3555
nngccggccg cgcccgggct gggacgtccg agcgggaaga tgttttccgc cctgaagaag
60
ctggtgggggt cggaccaggc cccggggccg gacaagaaca tccccgccg gctgcagtcc
120
atgaaccagg cgttgcagag gcgcttcgcc aaggggggtgc agtacaacat gaagatagt
180
atccggggag acaggaacac gggcaagaca gcgctgtggc accgcctgca gggccggccg
240
ttcgtggagg agtacatccc cacacaggag atccagggtca ccagcatcca ctggagctac
300
aagaccacgg atgacatcgt gaagggtgaa gtctgggatg tagtagacaa aggaaaatgc
360
aaaaagcgag gcgacggctt aaagatggag aacgaccccc aggaggcgga gtctgaaatg
420
gccctggatg ctgagttcct ggacgtgtac aagaactgca acgggggtggt catgatgttc
480
gacattacca agcagtggac cttcaattac attctccggg agcttccaaa agtgcccacc
540
cacgtgccag tgtgcgtgct ggggaactac cgggacatgg gcgagcaccg agtcatcnn
600
tgccggacgn acgtgcgtga cttcatcgac aacctggaca gacctccagg ttcctcctac
660
ttccgctatg ctgagtcttc catgaagaac agcttcggcc taaagtaact tcataagttc
720
ttcaatatcc catttttgca gcttcagagg gagacgctgt tgcggcagct ggagacgaac
780
cagctggaca tggacgccac gctggaggag ctgtcggtgc agcaggagac ggaggaccag
840
aactacggca tcttcttgga gatgatggag gctcgcagcc gtggccatgc gtccccactg
900
gcggccaacg ggcagagccc atccccgggc tccagtcac cagtgggtgc tgcaggcgct
960
gtgtccacgg ggagctccag ccccggcaca gccagcccg cccacagct gccctcaat
1020

```

ggttgccccca ccatacctc
1038

<210> 3556
<211> 333
<212> PRT
<213> Homo sapiens

<400> 3556
Met Phe Ser Ala Leu Lys Lys Leu Val Gly Ser Asp Gln Ala Pro Gly
1 5 10 15
Arg Asp Lys Asn Ile Pro Ala Gly Leu Gln Ser Met Asn Gln Ala Leu
20 25 30
Gln Arg Arg Phe Ala Lys Gly Val Gln Tyr Asn Met Lys Ile Val Ile
35 40 45
Arg Gly Asp Arg Asn Thr Gly Lys Thr Ala Leu Trp His Arg Leu Gln
50 55 60
Gly Arg Pro Phe Val Glu Glu Tyr Ile Pro Thr Gln Glu Ile Gln Val
65 70 75 80
Thr Ser Ile His Trp Ser Tyr Lys Thr Thr Asp Asp Ile Val Lys Val
85 90 95
Glu Val Trp Asp Val Val Asp Lys Gly Lys Cys Lys Lys Arg Gly Asp
100 105 110
Gly Leu Lys Met Glu Asn Asp Pro Gln Glu Ala Glu Ser Glu Met Ala
115 120 125
Leu Asp Ala Glu Phe Leu Asp Val Tyr Lys Asn Cys Asn Gly Val Val
130 135 140
Met Met Phe Asp Ile Thr Lys Gln Trp Thr Phe Asn Tyr Ile Leu Arg
145 150 155 160
Glu Leu Pro Lys Val Pro Thr His Val Pro Val Cys Val Leu Gly Asn
165 170 175
Tyr Arg Asp Met Gly Glu His Arg Val Ile Xaa Cys Arg Thr Xaa Val
180 185 190
Arg Asp Phe Ile Asp Asn Leu Asp Arg Pro Pro Gly Ser Ser Tyr Phe
195 200 205
Arg Tyr Ala Glu Ser Ser Met Lys Asn Ser Phe Gly Leu Lys Tyr Leu
210 215 220
His Lys Phe Phe Asn Ile Pro Phe Leu Gln Leu Gln Arg Glu Thr Leu
225 230 235 240
Leu Arg Gln Leu Glu Thr Asn Gln Leu Asp Met Asp Ala Thr Leu Glu
245 250 255
Glu Leu Ser Val Gln Gln Glu Thr Glu Asp Gln Asn Tyr Gly Ile Phe
260 265 270
Leu Glu Met Met Glu Ala Arg Ser Arg Gly His Ala Ser Pro Leu Ala
275 280 285
Ala Asn Gly Gln Ser Pro Ser Pro Gly Ser Gln Ser Pro Val Val Pro
290 295 300
Ala Gly Ala Val Ser Thr Gly Ser Ser Ser Pro Gly Thr Ala Gln Pro
305 310 315 320
Ala Pro Gln Leu Pro Leu Asn Gly Cys Pro Thr Ile Leu
325 330

<210> 3557
<211> 486

<212> DNA

<213> Homo sapiens

<400> 3557

tcagtgcacaa ggaggacgtt tgggcacagc ggcattgcag tgcacacgtg gtagtgcattg
60
ccggcattga tcaagtccat ctgggctatg gccataagcc aacaccagtt ctatctggac
120
agaaagcaga gtaagtccaa aatccatgca gcacgcagcc tgagtgcagat cgccatcgac
180
ctgaccgaga cggggacgct gaagacctcg aagctggcca acatgggtag caaggggaag
240
atcatcagcg gcagcagcgg cagcctgctg tcttcaggat ctggtgccag gagacactgc
300
attctactcc caggttctca ggaatcagat agctcgcagt cggccaagaa ggacatgctg
360
gctgccttga agtccaggca ggaagctctg gaggaaaccc tgcgtcagag gctggaggaa
420
ctgaagaagc tgtgtctccg agaagctgag ctacaggcca agctgccagt agaatatccc
480
ctggat
486

<210> 3558

<211> 162

<212> PRT

<213> Homo sapiens

<400> 3558

Ser	Val	Thr	Arg	Arg	Thr	Phe	Gly	His	Ser	Gly	Ile	Ala	Val	His	Thr
1				5					10					15	
Trp	Tyr	Ala	Cys	Pro	Ala	Leu	Ile	Lys	Ser	Ile	Trp	Ala	Met	Ala	Ile
			20					25					30		
Ser	Gln	His	Gln	Phe	Tyr	Leu	Asp	Arg	Lys	Gln	Ser	Lys	Ser	Lys	Ile
		35					40					45			
His	Ala	Ala	Arg	Ser	Leu	Ser	Glu	Ile	Ala	Ile	Asp	Leu	Thr	Glu	Thr
	50					55					60				
Gly	Thr	Leu	Lys	Thr	Ser	Lys	Leu	Ala	Asn	Met	Gly	Ser	Lys	Gly	Lys
65					70					75				80	
Ile	Ile	Ser	Gly	Ser	Ser	Gly	Ser	Leu	Leu	Ser	Ser	Gly	Ser	Gly	Ala
			85					90						95	
Arg	Arg	His	Cys	Ile	Leu	Leu	Pro	Gly	Ser	Gln	Glu	Ser	Asp	Ser	Ser
			100					105					110		
Gln	Ser	Ala	Lys	Lys	Asp	Met	Leu	Ala	Ala	Leu	Lys	Ser	Arg	Gln	Glu
		115					120					125			
Ala	Leu	Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu
	130					135					140				
Cys	Leu	Arg	Glu	Ala	Glu	Leu	Thr	Gly	Lys	Leu	Pro	Val	Glu	Tyr	Pro
145					150					155					160
Leu	Asp														

<210> 3559

<211> 673

<212> DNA

<213> Homo sapiens

<400> 3559

gaaggagcga gcgggggcgc gaggcgttta cctggaggca gcggttggg cgcgcagagc
 60
 ggccgcgggt cccccgcacc tgcggccatg gatgaggagc ggcacctta catcgccgg
 120
 gccggcgaag caggggctat cgagcgggtc ctgagggatt acagcgacaa gcatagggct
 180
 actttcaaat ttgaatcaac agatgaagat aaaagaaaga aactctgtga aggcatttt
 240
 aaagtcctta taaaggacat cccaacaaca tgtcaagtgt cctgcctgga agtactccgc
 300
 attctctcca gagacaaaaa ggtttttagtt cctgtgacaa ctaaggaaaa tatgcagata
 360
 ctgctgcgac tagccaagct aaatgagtta gatgattctt tggagaaagt atcagagttc
 420
 ccagttattg tggagtcatt aaaatgtctg tgtaatatag tgttcaacag tcagatggca
 480
 cagcagctca gcctggaact taatcttgcg gcaaagctct gtaacctct gagaaagtgc
 540
 aaggaccgga aatttatcaa tgacattaag tgctttgact tgcgcttgct cttccttctg
 600
 tcacttttgc acaccgacat caggtcacaa ttgcgctatg agtccaggg actaccgctg
 660
 ctaacgcaga tcg
 673

<210> 3560

<211> 195

<212> PRT

<213> Homo sapiens

<400> 3560

Met	Asp	Glu	Glu	Arg	Ala	Leu	Tyr	Ile	Val	Arg	Ala	Gly	Glu	Ala	Gly
1				5					10				15		
Ala	Ile	Glu	Arg	Val	Leu	Arg	Asp	Tyr	Ser	Asp	Lys	His	Arg	Ala	Thr
			20					25					30		
Phe	Lys	Phe	Glu	Ser	Thr	Asp	Glu	Asp	Lys	Arg	Lys	Lys	Leu	Cys	Glu
		35					40					45			
Gly	Ile	Phe	Lys	Val	Leu	Ile	Lys	Asp	Ile	Pro	Thr	Thr	Cys	Gln	Val
	50					55				60					
Ser	Cys	Leu	Glu	Val	Leu	Arg	Ile	Leu	Ser	Arg	Asp	Lys	Lys	Val	Leu
65					70					75				80	
Val	Pro	Val	Thr	Thr	Lys	Glu	Asn	Met	Gln	Ile	Leu	Leu	Arg	Leu	Ala
			85					90					95		
Lys	Leu	Asn	Glu	Leu	Asp	Asp	Ser	Leu	Glu	Lys	Val	Ser	Glu	Phe	Pro
		100					105					110			
Val	Ile	Val	Glu	Ser	Leu	Lys	Cys	Leu	Cys	Asn	Ile	Val	Phe	Asn	Ser
	115					120					125				
Gln	Met	Ala	Gln	Gln	Leu	Ser	Leu	Glu	Leu	Asn	Leu	Ala	Ala	Lys	Leu
	130					135					140				
Cys	Asn	Leu	Leu	Arg	Lys	Cys	Lys	Asp	Arg	Lys	Phe	Ile	Asn	Asp	Ile

145 150 155 160
 Lys Cys Phe Asp Leu Arg Leu Leu Phe Leu Leu Ser Leu Leu His Thr
 165 170 175
 Asp Ile Arg Ser Gln Leu Arg Tyr Glu Leu Gln Gly Leu Pro Leu Leu
 180 185 190
 Thr Gln Ile
 195

<210> 3561
 <211> 523
 <212> DNA
 <213> Homo sapiens

<400> 3561
 acgctgcct gtaggcagac gaggggccag tgggcagagc agacatgaat gccccctgaa
 60
 ggctcacaga gctgactcag aagggccatt gtcacacact ggtaagagct gattctgagg
 120
 ggagggcatg agacgcctat tgcagagctg ctcaccagaa ggacacagga atttagaaga
 180
 gaagctccta cctgcccccg atcatgcacg tggccactga ggatgccaga cgaggtgatg
 240
 ctggtctcat agagaatgta cccgaaggac tgtccatttc cccattgac tggcagggttc
 300
 tccatgttga tgggcttttc agacttgatt ggctgcgtac agaagagatg gaggggtggg
 360
 caggctcagg aggagtgggg tcacagacag actctgcttg ggggctggca catgggggtg
 420
 aagcggaggt ttggtgggtg ttttctactt tgacttctca ttgcactaaa catacaactc
 480
 tccaggttga cggggaagag gagggtgggca aaggggtgtg cac
 523

<210> 3562
 <211> 106
 <212> PRT
 <213> Homo sapiens

<400> 3562
 Met His Val Ala Thr Glu Asp Ala Arg Arg Gly Asp Ala Gly Leu Ile
 1 5 10 15
 Glu Asn Val Pro Glu Gly Leu Ser Ile Ser Pro Ile Asp Trp Gln Val
 20 25 30
 Leu His Val Asp Gly Leu Phe Arg Leu Asp Trp Leu Arg Thr Glu Glu
 35 40 45
 Met Glu Gly Trp Ala Gly Ser Gly Gly Val Gly Ser Gln Thr Asp Ser
 50 55 60
 Ala Trp Gly Leu Ala His Gly Val Glu Ala Glu Val Trp Trp Val Phe
 65 70 75 80
 Ser Thr Leu Thr Ser His Cys Thr Lys His Thr Thr Leu Gln Gly Asp
 85 90 95
 Gly Glu Glu Glu Trp Gly Lys Gly Val Cys
 100 105

<210> 3563
 <211> 359
 <212> DNA
 <213> Homo sapiens

<400> 3563
 nnacgcgtag tcgaactgcc cgcgctcgag cgcctccttg tggtcggtcc ccgtccgggt
 60
 cgaagccagg ggcgcgcggc gatgtgagcc atgagcgcga cgtggacgct gtcgccggag
 120
 cccctgccgc cgtcgacggg gccccagtg ggcgcgggccc tggacgcgga gcagcgcacg
 180
 gtgttcgcct tcgtgctctg cctgctcgtg gtgctggtgc tgttgatggt gcgctgcgtg
 240
 cgcacccctgc tcgaccccta cagccgcctg cccgcctcgt cctggaccga ccacaaggag
 300
 gcgctcgagc gcgggcagtt cgactacgcg ttggtgtgag gggcgcggcg cccctagg
 359

<210> 3564
 <211> 82
 <212> PRT
 <213> Homo sapiens

<400> 3564
 Met Ser Ala Thr Trp Thr Leu Ser Pro Glu Pro Leu Pro Pro Ser Thr
 1 5 10 15
 Gly Pro Pro Val Gly Ala Gly Leu Asp Ala Glu Gln Arg Thr Val Phe
 20 25 30
 Ala Phe Val Leu Cys Leu Leu Val Val Leu Val Leu Leu Met Val Arg
 35 40 45
 Cys Val Arg Ile Leu Leu Asp Pro Tyr Ser Arg Met Pro Ala Ser Ser
 50 55 60
 Trp Thr Asp His Lys Glu Ala Leu Glu Arg Gly Gln Phe Asp Tyr Ala
 65 70 75 80
 Leu Val

<210> 3565
 <211> 580
 <212> DNA
 <213> Homo sapiens

<400> 3565
 acgcgtcgtg ggtgggaaaa gggatgccag gacaccagaa gagcaatata aaacagctcc
 60
 cgtgagcagg cacaggagac cttccgcgcc gccggccggg cgaccccgca ggaagtagga
 120
 aggacgagcg cgcacttcaa gtcccagaag cccccgtttc ctggagcccc cgccgtgccg
 180
 cgctacgccc gccgggagcc gggcagagcg gccaaagtgt cgcagcccaa gaaaagaaa
 240
 cttgagtcgg ggggcggcgc cgaaggaggg gaggggaactg aagaggaaga tggcgcggag
 300

cgggagggcgg ccctggagcgg accccggacg actaagcggg aacggggacca gctgtactac
 360
 gagtgtact cggacgtttc ggtccacgag gagatgatcg cggaccgcgt ccgcaccgat
 420
 gcctaccgct gggtttccct tcggaactgg gcagcactgc gaggcaagac ggtactggac
 480
 gtgggcgcgg gcaccggcat tctgagcatc ttctgtgccc aggccggggc cgggcgcgtg
 540
 tacgcggtag aggccagcgc catctggcaa caggcccggg
 580

<210> 3566

<211> 193

<212> PRT

<213> Homo sapiens

<400> 3566

Thr	Arg	Arg	Gly	Trp	Glu	Lys	Gly	Cys	Gln	Asp	Thr	Arg	Arg	Ala	Ile
1				5					10					15	
Gln	Asn	Ser	Ser	Arg	Glu	Gln	Ala	Gln	Glu	Thr	Phe	Arg	Ala	Ala	Gly
			20					25					30		
Arg	Ala	Thr	Pro	Gln	Glu	Val	Gly	Arg	Thr	Ser	Ala	His	Phe	Lys	Ser
			35				40					45			
Gln	Lys	Pro	Pro	Phe	Pro	Gly	Ala	Arg	Ala	Val	Pro	Arg	Tyr	Ala	Arg
	50					55				60					
Arg	Glu	Pro	Gly	Arg	Ala	Ala	Lys	Met	Ser	Gln	Pro	Lys	Lys	Arg	Lys
65					70				75					80	
Leu	Glu	Ser	Gly	Gly	Gly	Ala	Glu	Gly	Gly	Glu	Gly	Thr	Glu	Glu	Glu
			85					90					95		
Asp	Gly	Ala	Glu	Arg	Glu	Ala	Ala	Leu	Glu	Arg	Pro	Arg	Thr	Thr	Lys
			100					105					110		
Arg	Glu	Arg	Asp	Gln	Leu	Tyr	Tyr	Glu	Cys	Tyr	Ser	Asp	Val	Ser	Val
			115				120					125			
His	Glu	Glu	Met	Ile	Ala	Asp	Arg	Val	Arg	Thr	Asp	Ala	Tyr	Arg	Trp
	130					135					140				
Val	Ser	Leu	Arg	Asn	Trp	Ala	Ala	Leu	Arg	Gly	Lys	Thr	Val	Leu	Asp
145					150				155					160	
Val	Gly	Ala	Gly	Thr	Gly	Ile	Leu	Ser	Ile	Phe	Cys	Ala	Gln	Ala	Gly
			165					170					175		
Ala	Arg	Arg	Val	Tyr	Ala	Val	Glu	Ala	Ser	Ala	Ile	Trp	Gln	Gln	Ala
			180					185					190		

Arg

<210> 3567

<211> 2811

<212> DNA

<213> Homo sapiens

<400> 3567

nngaagccga gctccgcgcc cagcaggaag aagaaacgag gaagcagcaa gaactcgaag
 60
 ccttcagaaa gagccagaag gaagctgaac tgaccctga actggagaaa cagaaggaaa
 120

ataagcaggt ggaagagatc ctccgtctgg agaaagaaat cgaggacctg cagcgcatga
180
aggagcagca ggagctgtcg ctgaccgagg cttccctgca gaagctgcag gagcggcggg
240
accaggagct ccgcaggctg gaggaggaga tttttgcacc tgaaaaaggc agccatagtt
300
ttccagaagc aactcagagg tcagattgct cggagagttt acagacaatt gctggcagag
360
aaaagggagc aagaagaaaa gaagaaacag gaagaggaag aaaagaagaa acgggaggaa
420
gaagaaagag aaagagagag agagcgaaga gaagccgagc tccgcgcca gcaggaagaa
480
gaaacgagga agcagcaaga actcgaagcc ttgcagaaga gccagaagga agctgaactg
540
acccgtgaac tggagaaaca gaagaaaaat aagcaggtgg aagagatcct ccgtctggag
600
aaagaaatcg aggacctgca gcgcatgaag gagcagcagg agctgtcgct gaccgaggct
660
tcctgcaga agctgcagga gcggcgggac caggagctcc gcaggctgga ggaggaagcg
720
tgaggggcgg ccaggagtt cctcgagtcc ctcaatttcg acgagatcga cgagtgtgtc
780
cggaatatcg agcggtcctt gtcgggggga agcgaatttt ccagcgagct ggctgagagc
840
gcatgcgagg agaagcccaa cttcaacttc agccagccct acccagagga ggaggtcgat
900
gagggcttcg aagccgacga cgacgccttc aaggactccc ccaaccccag cgagcacggc
960
cactcagacc agcgaacaag tggcatccgg accagcgatg actcttcaga ggaggacca
1020
tacatgaacg acacggtggt gcccaccagc ccagtgcgg acagcacggg gctgctcgcc
1080
ccatcagtgc aggactccgg gagcctacac aactcctcca gcggcgagtc cacctactgc
1140
atgccccaga acgctgggga cttgccctcc ccagacggcg actacgacta cgaccaggat
1200
gactatgagg acggtgccat cacttcgggc agcagcgtga ccttctcaa ctctacggc
1260
agccagtggc ccccgacta ccgctgctct gtggggacct acaacagctc gggcgctac
1320
cggttcagct ctgagggggc gcagtcctcg tttgaagata gtgaagagga ctttgattcc
1380
aggtttgata cagatgatga gctttcatac cggcgtgact ctgtgtacag ctgtgtcact
1440
ctgccgtatt tccacagctt tctgtacatg aaagggtggc tgatgaactc ttggaaacgc
1500
cgctgggtgc tcctcaagga tgaaaccttc ttgtgggtcc gctccaagca ggaggccctc
1560
aagcaaggct ggctccacaa aaaagggggg ggctcctcca cgctgtccag gagaaattgg
1620
aagaagcgct ggtttgctct ccgccagtcc aagctgatgt actttgaaaa cgacagcgag
1680
gagaagctca agggcacctg agaagtgcga acggcaaaag agatcataga taacaccacc
1740

aaggagaatg ggatcgacat cattatggcc gataggactt tccacctgat tgcagagtcc
1800
ccagaagatg ccagccagtg gttcagcgtg ctgagtcagg tccacgcgtc cacggaccag
1860
gagatccagg agatgcatga tgagcaggca aacccacaga atgctgtggg caccttggat
1920
gtggggctga ttgattctgt gtgtgcctct gacagccctg atagacccaa ctcgtttgtg
1980
atcatcacgg ccaaccgggt gctgcactgc aacgccgaca cgccggagga gatgcaccac
2040
tggaataccc tgctgcagag gtccaaaggg gacaccagag tggagggcca ggaattcatc
2100
gtgagaggat ggttgacaaa agaggtgaag aacagtccaa agatgtcttc actgaaactg
2160
aagaaacggg ggtttgtact caccacaat tccctggatt actacaagag ttcagagaag
2220
aacgcgctca aactggggac cctggctctc aacagcctct gctctgtcgt ccccccagat
2280
gagaagatat tcaaagagac aggctactgg aacgtcaccg tgtacgggag caagcactgt
2340
taccggctct acaccaagct gctcaacgag gccaccgggt ggtccagtgt cagtcaaaac
2400
gtgactgaca ccaaggcccc gatcgacacc cccaccacgc agctgattca agatatcaag
2460
gagaactgcc tgaactcgga tgtggtggaa cagatttaca agcgggaacc gatccttcga
2520
tacacccatc accccttgca ctcccactc ctgccccttc cgtatgggga cataaatctc
2580
aacttgctca aagacaaagg ctataccacc cttcaggatg aggccatcaa gatattcaat
2640
tcctgcagc aactggagtc catgtctgac ccaattccaa taatccaggg catcctacag
2700
acagggcatg acctgcgacc tctgcgggac gagctgtact gccagcttat caaacagacc
2760
aacaaagtgc cccaccccg cagtgtgggc aacctgtaca gctggcagat c
2811

<210> 3568

<211> 869

<212> PRT

<213> Homo sapiens

<400> 3568

Pro	Arg	Leu	Pro	Cys	Arg	Ser	Cys	Arg	Ser	Gly	Gly	Thr	Arg	Ser	Ser
1				5					10					15	
Ala	Gly	Trp	Arg	Arg	Arg	Phe	Leu	His	Leu	Lys	Lys	Ala	Ala	Ile	Val
			20					25					30		
Phe	Gln	Lys	Gln	Leu	Arg	Gly	Gln	Ile	Ala	Arg	Arg	Val	Tyr	Arg	Gln
		35				40						45			
Leu	Leu	Ala	Glu	Lys	Arg	Glu	Gln	Glu	Glu	Lys	Lys	Lys	Gln	Glu	Glu
	50					55					60				
Glu	Glu	Lys	Lys	Lys	Arg	Glu	Glu	Glu	Glu	Arg	Glu	Arg	Glu	Arg	Glu
65				70					75				80		
Arg	Arg	Glu	Ala	Glu	Leu	Arg	Ala	Gln	Gln	Glu	Glu	Glu	Thr	Arg	Lys

														85			90			95		
Gln	Gln	Glu	Leu	Glu	Ala	Leu	Gln	Lys	Ser	Gln	Lys	Glu	Ala	Glu	Leu							
			100				105						110									
Thr	Arg	Glu	Leu	Glu	Lys	Gln	Lys	Glu	Asn	Lys	Gln	Val	Glu	Glu	Ile							
			115				120						125									
Leu	Arg	Leu	Glu	Lys	Glu	Ile	Glu	Asp	Leu	Gln	Arg	Met	Lys	Glu	Gln							
			130				135						140									
Gln	Glu	Leu	Ser	Leu	Thr	Glu	Ala	Ser	Leu	Gln	Lys	Leu	Gln	Glu	Arg							
145				150						155			160									
Arg	Asp	Gln	Glu	Leu	Arg	Arg	Leu	Glu	Glu	Glu	Ala	Cys	Arg	Ala	Ala							
			165						170			175										
Gln	Glu	Phe	Leu	Glu	Ser	Leu	Asn	Phe	Asp	Glu	Ile	Asp	Glu	Cys	Val							
			180						185			190										
Arg	Asn	Ile	Glu	Arg	Ser	Leu	Ser	Gly	Gly	Ser	Glu	Phe	Ser	Ser	Glu							
			195						200			205										
Leu	Ala	Glu	Ser	Ala	Cys	Glu	Glu	Lys	Pro	Asn	Phe	Asn	Phe	Ser	Gln							
			210			215						220										
Pro	Tyr	Pro	Glu	Glu	Glu	Val	Asp	Glu	Gly	Phe	Glu	Ala	Asp	Asp	Asp							
225				230						235			240									
Ala	Phe	Lys	Asp	Ser	Pro	Asn	Pro	Ser	Glu	His	Gly	His	Ser	Asp	Gln							
			245						250			255										
Arg	Thr	Ser	Gly	Ile	Arg	Thr	Ser	Asp	Asp	Ser	Ser	Glu	Glu	Asp	Pro							
			260						265			270										
Tyr	Met	Asn	Asp	Thr	Val	Val	Pro	Thr	Ser	Pro	Ser	Ala	Asp	Ser	Thr							
			275						280			285										
Val	Leu	Leu	Ala	Pro	Ser	Val	Gln	Asp	Ser	Gly	Ser	Leu	His	Asn	Ser							
			290			295						300										
Ser	Ser	Gly	Glu	Ser	Thr	Tyr	Cys	Met	Pro	Gln	Asn	Ala	Gly	Asp	Leu							
305				310						315			320									
Pro	Ser	Pro	Asp	Gly	Asp	Tyr	Asp	Tyr	Asp	Gln	Asp	Asp	Tyr	Glu	Asp							
			325						330			335										
Gly	Ala	Ile	Thr	Ser	Gly	Ser	Ser	Val	Thr	Phe	Ser	Asn	Ser	Tyr	Gly							
			340						345			350										
Ser	Gln	Trp	Ser	Pro	Asp	Tyr	Arg	Cys	Ser	Val	Gly	Thr	Tyr	Asn	Ser							
			355						360			365										
Ser	Gly	Ala	Tyr	Arg	Phe	Ser	Ser	Glu	Gly	Ala	Gln	Ser	Ser	Phe	Glu							
			370			375						380										
Asp	Ser	Glu	Glu	Asp	Phe	Asp	Ser	Arg	Phe	Asp	Thr	Asp	Asp	Glu	Leu							
385				390						395			400									
Ser	Tyr	Arg	Arg	Asp	Ser	Val	Tyr	Ser	Cys	Val	Thr	Leu	Pro	Tyr	Phe							
			405						410			415										
His	Ser	Phe	Leu	Tyr	Met	Lys	Gly	Gly	Leu	Met	Asn	Ser	Trp	Lys	Arg							
			420						425			430										
Arg	Trp	Cys	Val	Leu	Lys	Asp	Glu	Thr	Phe	Leu	Trp	Phe	Arg	Ser	Lys							
			435			440																

515	520	525
Ile Ala Glu Ser Pro Glu Asp	Ala Ser Gln Trp Phe Ser Val Leu Ser	
530	535	540
Gln Val His Ala Ser Thr Asp	Gln Glu Ile Gln Glu Met His Asp Glu	
545	550	555
Gln Ala Asn Pro Gln Asn Ala Val Gly Thr Leu Asp Val Gly Leu Ile		560
	565	570
Asp Ser Val Cys Ala Ser Asp Ser Pro Asp Arg Pro Asn Ser Phe Val		575
	580	585
Ile Ile Thr Ala Asn Arg Val Leu His Cys Asn Ala Asp Thr Pro Glu		590
	595	600
Glu Met His His Trp Ile Thr Leu Leu Gln Arg Ser Lys Gly Asp Thr		605
	610	615
Arg Val Glu Gly Gln Glu Phe Ile Val Arg Gly Trp Leu His Lys Glu		620
625	630	635
Val Lys Asn Ser Pro Lys Met Ser Ser Leu Lys Leu Lys Lys Arg Trp		640
	645	650
Phe Val Leu Thr His Asn Ser Leu Asp Tyr Tyr Lys Ser Ser Glu Lys		655
	660	665
Asn Ala Leu Lys Leu Gly Thr Leu Val Leu Asn Ser Leu Cys Ser Val		670
	675	680
Val Pro Pro Asp Glu Lys Ile Phe Lys Glu Thr Gly Tyr Trp Asn Val		685
	690	695
Thr Val Tyr Gly Arg Lys His Cys Tyr Arg Leu Tyr Thr Lys Leu Leu		700
705	710	715
Asn Glu Ala Thr Arg Trp Ser Ser Val Ser Gln Asn Val Thr Asp Thr		720
	725	730
Lys Ala Pro Ile Asp Thr Pro Thr Gln Gln Leu Ile Gln Asp Ile Lys		735
	740	745
Glu Asn Cys Leu Asn Ser Asp Val Val Glu Gln Ile Tyr Lys Arg Asn		750
	755	760
Pro Ile Leu Arg Tyr Thr His His Pro Leu His Ser Pro Leu Leu Pro		765
	770	775
Leu Pro Tyr Gly Asp Ile Asn Leu Asn Leu Leu Lys Asp Lys Gly Tyr		780
785	790	795
Thr Thr Leu Gln Asp Glu Ala Ile Lys Ile Phe Asn Ser Leu Gln Gln		800
	805	810
Leu Glu Ser Met Ser Asp Pro Ile Pro Ile Ile Gln Gly Ile Leu Gln		815
	820	825
Thr Gly His Asp Leu Arg Pro Leu Arg Asp Glu Leu Tyr Cys Gln Leu		830
	835	840
Ile Lys Gln Thr Asn Lys Val Pro His Pro Gly Ser Val Gly Asn Leu		845
	850	855
Tyr Ser Trp Gln Ile		860
865		

<210> 3569

<211> 5070

<212> DNA

<213> Homo sapiens

<400> 3569

tctgaatccc cccccagcac cctcaatgcc cagatgctga atggaatgat caaacaggag
60

cctgggaccg tgacagccct gcctctgcac ccactcgag ccccatcgcc accctggcct
120
ccccagggtc cgctctcccc gggccctggg tccttgctc tcagcattgc cctgtgccag
180
acaccgcctt ggcacccgcc aggtgcccc tccccaggcc tcctgcagga cagtgcagc
240
ctcagtggct cctacctgga cccaactac cagtccatca agtggcagcc tcatcagcag
300
aacaagtggg cgaccctgta cgatgctaac tacaaggagc tgcccatgct cacctaccgc
360
gtggatgcgg acaagggtt caacttttcg gtgggagcgc acgcctttgt gtgccagaag
420
agaaccact tccagggtgac agtgtacatc ggcagctgg gcgagcccaa gtacgtcaag
480
acgcccagg gcctcaagcc cctcgactgc ttctatctga agctgcacgg agtgaagctg
540
gaggccctga accagtccat taacatcgag cagtcccagt cagaccggag caagcggccc
600
ttcaaccgg tcacggtcaa tctgccccct gagcaggtca cgaagggtgac tgtggggcgg
660
ctgcacttca gcgagaccac cgctaacaac atgcgtaaga agggcaagcc caaccggac
720
cagagggtact tcatgctggg ggtggccctc cagggtcatg cacagaacca gaactacag
780
ctggccgccc agatctcaga gcgcatcatt gtgcgggct ccaaccagg ccagttcgag
840
agcgacagcg atgtgttggt gcagcgggca cagggtgccg acaccgtctt ccaccacggc
900
cgcggtgggca tcaacacaga ccggccggat gaggcgctgg ttgtgcacgg gaatgtcaag
960
gtcatgggct cgcttatgca cccctccgac ctgcgcgcca aggaacacgt gcaggaggtg
1020
gacaccaccg agcaattgaa gaggatctcg cgcagcggc tgggtgacta cagatacaag
1080
cccaggttcg ccgccagcgc gggcatcgag gccaccgcgc cagagacagg tgtcatcgct
1140
caggaggtga aggagatctt gcctgaggct gtgaaagaca ccggagacat ggtctttgcc
1200
aatgggaaaa ccatagagaa cttcctgggt gtgaacaagg agcgcatctt catggagaac
1260
gtaggggccc tgaaggagct gtgcaagctg acagacaacc tggagacgcg cattgatgag
1320
ctggagcgct ggagccacaa gctggccaag ctgcggcggc tcgacagcct caagtccacc
1380
ggcagctcgg gcgccttcag ccatgcaggg agccagttca gtcgggcggg cagcgtcccc
1440
cacaagaaga ggccccccaa ggtggccagc aagtcacgt cctgggttcc ggaccaggcc
1500
tgcacagcc agcgcttcc gcagggaacc atcattgcc tgggtgggtg catggccttc
1560
agcgtggtgt ccatgtccac actgtacgtg ctgagcctgc gcacagagga ggacctggtg
1620
gacactgatg gctcttttgc cgtgtccact tcctgtctcc tggccctgct ccggccccag
1680

ccccctgggg ggagtgaggc cttgtgcca tgggtccagcc agagctttgg gaccacgcag
1740
ctccgacagt ccccttgac cacggggcta ccaggcatac agccctcttt gctgctggtg
1800
accaccagcc tcaccagctc ggccccaggt tctgctgtcc gcaccttga catgtgttcc
1860
agccaccctt gccctgtcat ctgctgttcc tcaccacta ccaacctac cactggctct
1920
agtcttggcc ccagctttaa ccctggccat gttctcagcc caagtcccag cccagcacc
1980
aaccgctcag gccccagcca gatggccctt ctgccagtca ccaacatcag agccaagtcc
2040
tggggtcttt cagtcaatgg cattgaccac tccaagcatc acaagagtct ggagcctctg
2100
gccagccctg cagtccccct ccctgggggg cagggcaaag ccaagaacag tcccagcctt
2160
ggtttccatg gccgggccc cagaggggcc ctccagtcca gcgtggggcc tgctgagccc
2220
acctggggcc agggccagtc agcctctctc cttgcagagc cagtgcctc cctgacctcc
2280
atccaggtgc tggagaattc gatgtccatc acctcccagt actgtgctcc aggggatgcc
2340
tgcaggcctg ggaacttcac ctaccacatc cctgtcagca gtggcaccac actgcacctc
2400
agcctgactc tgcagatgaa ctctctctcc cccgtgtctg tgggtgctgtg cagcctgagg
2460
tcaaaggagg aaccatgtga ggaggggagc cttccacaga gtctccacac ccaccaggac
2520
accaggggca cctctcaccg gtggccaata accatcctgt ccttccgtga attcacctac
2580
cacttccggg tggcactgct gggtcaggcc aactgcagtt cagaggctct cggccagcca
2640
gccacagact accacttcca cttctaccgc ctgtgtgact gagctgccct cctgaggcag
2700
caccacacca gggaccaggg gtgcccaggc accccccaac actggatgca atgggtgtac
2760
actggagccc gctgcaggcc agctctgctg ttactggcc ctacccgaga ctggtgaaac
2820
tggaagtctt cacactggag ttgctgttcc agctggctgc ccctcacggc acagagggaa
2880
cctgagagcc agagacttct tgggccttcc tgctgccac cccctagggg ccaggacagg
2940
accagtttac ctctttccag atatgggtgg tggagggctg gttcaggtgc cctggaggga
3000
aggggaagcc tgtggccctg atttgttcag agccattct ccttgcctc cctttttgag
3060
actggagcca acccttttgg agagaggacc tgccacctt tgagatcagc agggggctcg
3120
gatccagccc taagagactt ggggtggacc ccatgagtca atggagggca gacggctctc
3180
ccccttaaag ctgttccctg ggggatggct tggtagtga cttcttgggg tttgcctgtt
3240
acgccagact cggacttcta agctttaagt gtggcccagg aggtttcttc tccctgggag
3300

ggcttggtc ccaagaagtc ccagggcagc cgaggccagc cctgcctggg ttggagaaac
 3360
 tgactttgtg ccttaagtct actcagtgcc tggatgaagcc accctcagcc cttcacaggg
 3420
 ctgaaccagt agggggccagt gggccaggta agccctagag ccttgaacca ggaatatcca
 3480
 ggaagaggaa attccctttg agccccaga tggattgca gcttcactgc ctgcgttctt
 3540
 gggagcgtct ggagctcaca gtgatcagt accacatcat tctctctgag cagaggagca
 3600
 ggaatccctc aagcagcagc ctgggtcttg ctgggtgggca gatgcaaata gcttttgctg
 3660
 ttattaatga agtaattact aaatgcactt aaaccagggc aggaaggaat ggaaggatgg
 3720
 agctagaaag ctacagagtgg gccagagcag ggggtgtgaca cttgcaaaga cagggtctctg
 3780
 actctgatcc ctcccaggga gcctccgaca cccatcccac tcccaaccac caagaccctg
 3840
 ggttagggaa gaagttgtat cttaagtgcc accttcaagt ttcttagtgg tgcttggtgc
 3900
 attccgaggc tacatccagg ctcatggaag gagtgtagta ttcatttagc catgtctgcc
 3960
 atgggtccag aaatgggaaa gggaattgct gtccttgccc tgggttatgc tgccacctct
 4020
 ttgggaagca ggccttgccc ctgtcccacc actcattctc agctttgaat gggaggcctt
 4080
 tctatagtgg aggcctttcc ttgaagccta tgaactgcag gccccctttt gccattgatc
 4140
 tcaaagcact tgtcctcagg ataggggaaga gcagggggat gcaggaatag cagggatagc
 4200
 ttgtcccag cccctcccc aatttggttc cgttgacata ggaattttac gattcccaaa
 4260
 ccatgcaggg gctgagcctt ccttatgatg actttgttct ccctcccact gggggaatcc
 4320
 tccctatgcc ttaaaaactgc cgagccccac tccatgtaat aggattcctg ggcttcctca
 4380
 atgtttcttg actgcgggcc ctacgtcctt aactggaaag tgaccgtcca 4440
 ctgccccatg gagcccatct ggacacagca cagccccaaa accgttagca gctggctctg
 4500
 tttccaagcc tggggagggg ttctcagtgc caggagtggg ggacaggctg gggatccaag
 4560
 ctgcttgagg ggtcaacct tggaccaaag ttgccttaag cctgtggtaa aagggttca
 4620
 ggggaaggtaa gtgggccacc tgctggaagc tgccagctgc ccggctggca atggtgtgag
 4680
 tgtcttgccc ctgtccctgc cctggggctc agcaggctcat ccctcccttc ttctctctcc
 4740
 tttggcggtt gttcctgtag tcaactgggt aatctcccc tagcttcaag ctgtacatag
 4800
 ggccctccag tgcaaactct cctgcccata ccgtgcaccc ttagaagcct gcgtgtgcat
 4860
 agagcgcccc ctacttccca gttaactccc agttcttctc cctgagcttg gtatttgtca
 4920
 tgtgccaaact ctgactctga ggtgggcagt gaggggaagca gccccgggcc tgcttgcttc
 4980

ctgtccccga aatgttcgtt tcttctgaag taaatatata tatataaata aatgtataaa
 5040
 tactgctttg tatctgaaaa aaaaaaaaaa
 5070

<210> 3570
 <211> 893
 <212> PRT
 <213> Homo sapiens

<400> 3570
 Ser Glu Ser Pro Pro Ser Thr Leu Asn Ala Gln Met Leu Asn Gly Met
 1 5 10 15
 Ile Lys Gln Glu Pro Gly Thr Val Thr Ala Leu Pro Leu His Pro Thr
 20 25 30
 Arg Ala Pro Ser Pro Pro Trp Pro Pro Gln Gly Pro Leu Ser Pro Gly
 35 40 45
 Pro Gly Ser Leu Pro Leu Ser Ile Ala Arg Val Gln Thr Pro Pro Trp
 50 55 60
 His Pro Pro Gly Ala Pro Ser Pro Gly Leu Leu Gln Asp Ser Asp Ser
 65 70 75 80
 Leu Ser Gly Ser Tyr Leu Asp Pro Asn Tyr Gln Ser Ile Lys Trp Gln
 85 90 95
 Pro His Gln Gln Asn Lys Trp Ala Thr Leu Tyr Asp Ala Asn Tyr Lys
 100 105 110
 Glu Leu Pro Met Leu Thr Tyr Arg Val Asp Ala Asp Lys Gly Phe Asn
 115 120 125
 Phe Ser Val Gly Asp Asp Ala Phe Val Cys Gln Lys Lys Asn His Phe
 130 135 140
 Gln Val Thr Val Tyr Ile Gly Met Leu Gly Glu Pro Lys Tyr Val Lys
 145 150 155 160
 Thr Pro Glu Gly Leu Lys Pro Leu Asp Cys Phe Tyr Leu Lys Leu His
 165 170 175
 Gly Val Lys Leu Glu Ala Leu Asn Gln Ser Ile Asn Ile Glu Gln Ser
 180 185 190
 Gln Ser Asp Arg Ser Lys Arg Pro Phe Asn Pro Val Thr Val Asn Leu
 195 200 205
 Pro Pro Glu Gln Val Thr Lys Val Thr Val Gly Arg Leu His Phe Ser
 210 215 220
 Glu Thr Thr Ala Asn Asn Met Arg Lys Lys Gly Lys Pro Asn Pro Asp
 225 230 235 240
 Gln Arg Tyr Phe Met Leu Val Val Ala Leu Gln Ala His Ala Gln Asn
 245 250 255
 Gln Asn Tyr Thr Leu Ala Ala Gln Ile Ser Glu Arg Ile Ile Val Arg
 260 265 270
 Ala Ser Asn Pro Gly Gln Phe Glu Ser Asp Ser Asp Val Leu Trp Gln
 275 280 285
 Arg Ala Gln Val Pro Asp Thr Val Phe His His Gly Arg Val Gly Ile
 290 295 300
 Asn Thr Asp Arg Pro Asp Glu Ala Leu Val Val His Gly Asn Val Lys
 305 310 315 320
 Val Met Gly Ser Leu Met His Pro Ser Asp Leu Arg Ala Lys Glu His
 325 330 335
 Val Gln Glu Val Asp Thr Thr Glu Gln Leu Lys Arg Ile Ser Arg Met

340 345 350
 Arg Leu Val His Tyr Arg Tyr Lys Pro Glu Phe Ala Ala Ser Ala Gly
 355 360 365
 Ile Glu Ala Thr Ala Pro Glu Thr Gly Val Ile Ala Gln Glu Val Lys
 370 375 380
 Glu Ile Leu Pro Glu Ala Val Lys Asp Thr Gly Asp Met Val Phe Ala
 385 390 395 400
 Asn Gly Lys Thr Ile Glu Asn Phe Leu Val Val Asn Lys Glu Arg Ile
 405 410 415
 Phe Met Glu Asn Val Gly Ala Val Lys Glu Leu Cys Lys Leu Thr Asp
 420 425 430
 Asn Leu Glu Thr Arg Ile Asp Glu Leu Glu Arg Trp Ser His Lys Leu
 435 440 445
 Ala Lys Leu Arg Arg Leu Asp Ser Leu Lys Ser Thr Gly Ser Ser Gly
 450 455 460
 Ala Phe Ser His Ala Gly Ser Gln Phe Ser Arg Ala Gly Ser Val Pro
 465 470 475 480
 His Lys Lys Arg Pro Lys Val Ala Ser Lys Ser Ser Ser Val Val
 485 490 495
 Pro Asp Gln Ala Cys Ile Ser Gln Arg Phe Leu Gln Gly Thr Ile Ile
 500 505 510
 Ala Leu Val Val Val Met Ala Phe Ser Val Val Ser Met Ser Thr Leu
 515 520 525
 Tyr Val Leu Ser Leu Arg Thr Glu Glu Asp Leu Val Asp Thr Asp Gly
 530 535 540
 Ser Phe Ala Val Ser Thr Ser Cys Leu Leu Ala Leu Leu Arg Pro Gln
 545 550 555 560
 Pro Pro Gly Gly Ser Glu Ala Leu Cys Pro Trp Ser Ser Gln Ser Phe
 565 570 575
 Gly Thr Thr Gln Leu Arg Gln Ser Pro Leu Thr Thr Gly Leu Pro Gly
 580 585 590
 Ile Gln Pro Ser Leu Leu Leu Val Thr Thr Ser Leu Thr Ser Ser Ala
 595 600 605
 Pro Gly Ser Ala Val Arg Thr Leu Asp Met Cys Ser Ser His Pro Cys
 610 615 620
 Pro Val Ile Cys Cys Ser Ser Pro Thr Thr Asn Pro Thr Thr Gly Pro
 625 630 635 640
 Ser Leu Gly Pro Ser Phe Asn Pro Gly His Val Leu Ser Pro Ser Pro
 645 650 655
 Ser Pro Ser Thr Asn Arg Ser Gly Pro Ser Gln Met Ala Leu Leu Pro
 660 665 670
 Val Thr Asn Ile Arg Ala Lys Ser Trp Gly Leu Ser Val Asn Gly Ile
 675 680 685
 Asp His Ser Lys His His Lys Ser Leu Glu Pro Leu Ala Ser Pro Ala
 690 695 700
 Val Pro Phe Pro Gly Gly Gln Gly Lys Ala Lys Asn Ser Pro Ser Leu
 705 710 715 720
 Gly Phe His Gly Arg Ala Arg Arg Gly Ala Leu Gln Ser Ser Val Gly
 725 730 735
 Pro Ala Glu Pro Thr Trp Ala Gln Gly Gln Ser Ala Ser Leu Leu Ala
 740 745 750
 Glu Pro Val Pro Ser Leu Thr Ser Ile Gln Val Leu Glu Asn Ser Met
 755 760 765
 Ser Ile Thr Ser Gln Tyr Cys Ala Pro Gly Asp Ala Cys Arg Pro Gly

770		775		780
Asn Phe Thr Tyr His Ile Pro Val Ser Ser Gly Thr Pro Leu His Leu				
785		790		800
Ser Leu Thr Leu Gln Met Asn Ser Ser Ser Pro Val Ser Val Val Leu				
	805		810	815
Cys Ser Leu Arg Ser Lys Glu Glu Pro Cys Glu Glu Gly Ser Leu Pro				
	820		825	830
Gln Ser Leu His Thr His Gln Asp Thr Gln Gly Thr Ser His Arg Trp				
	835		840	845
Pro Ile Thr Ile Leu Ser Phe Arg Glu Phe Thr Tyr His Phe Arg Val				
	850		855	860
Ala Leu Leu Gly Gln Ala Asn Cys Ser Ser Glu Ala Leu Ala Gln Pro				
865		870		880
Ala Thr Asp Tyr His Phe His Phe Tyr Arg Leu Cys Asp				
	885		890	

<210> 3571
 <211> 528
 <212> DNA
 <213> Homo sapiens

<400> 3571
 acgcgtcccc tgtccggctt ggtatgggtc gcgctgctag cgctaggcca cgccttcttg
 60
 ttcaccgggg gcggtggtgag cgctggggac caggtgtcct attttctctt cgtcatcttc
 120
 acggcgtatg ccattgctgcc cttggggcatg cgggacgcgc cgctcgcggg cctcgctccc
 180
 tcactctcgc atctgctggt cctcgggctg tatcttgggc cacagccgga ctcacggcct
 240
 gcactgctgc cgcaggtgag cagcgaagta gcacaggctg cgctcaggac ggctctgcca
 300
 cgtgctagta ggctcctttt agggggttgt tgagctgtga ctccaaggca aggtgcaacg
 360
 ctgggcgcag gatacccaac cgtgctttcg cagagctggt acaacagtgt gatgcaatgc
 420
 ctgctgttac cagaagaggg atccaggcca cacggaaggg agtcgtgtcg tggtttaccc
 480
 cggggacaac agatgtgggt aatgaaacct tgacagagaa tgaaaaaa
 528

<210> 3572
 <211> 110
 <212> PRT
 <213> Homo sapiens

<400> 3572
 Thr Arg Pro Leu Ser Gly Leu Val Trp Val Ala Leu Leu Ala Leu Gly
 1 5 10 15
 His Ala Phe Leu Phe Thr Gly Gly Val Val Ser Ala Trp Asp Gln Val
 20 25 30
 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu
 35 40 45
 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His

50	55	60
Leu Leu Val Leu Gly	Leu Tyr Leu Gly Pro Gln	Pro Asp Ser Arg Pro
65	70	75
Ala Leu Leu Pro Gln Val	Ser Thr Gln Val Ala Gln Ala Ala	Leu Arg
85	90	95
Thr Ala Leu Pro Arg Ala	Ser Arg Leu Leu Leu Gly Gly Cys	
100	105	110

<210> 3573

<211> 1236

<212> DNA

<213> Homo sapiens

<400> 3573

```

gggggggggg ttatcccttg tttgggacgg ccgggctggt cttcataatg gggcattttc
60
tagccccaga ttaagggggc agtttctttc tttccggcca ccagcgggca ggatcacccc
120
ccctgcctgc tccccaaagc ccagccttca gccccccaa tcaatcccag ccacacacac
180
agtccattt tttccatcca ttctggtact tgtgtgttca ataaacctgg tggacacaca
240
gcttcacata cccacacact cacagccaca aaccccagaa gtcatgcaca tgccgacgca
300
ccttgaggca catgcacaca caaccacact tgtgtgcaaa gtggcagaca caccacaca
360
tgcatagaag caagtctctg gaccccttct gcatcccaca gagggggctc ccctgctgtg
420
tttgattggt tcttcgaagc ggctgccct gcctccgtgc aggaggatcc cccatcctg
480
cggcagttcc ctccagactt cagggaccag gaagctatgc agatgggtgcc taaattctgc
540
ttcccttttg atgtggaaag ggggcccccc agccccgccg tgcagcattt caccttcgcc
600
ctcacagacc ttgccggcaa ccgcagattt ggtttctgcc gcctgcgggc gggtagccag
660
agctgtctct gtatcctcag ccacctgcct tggttcgagg tgttttataa gctattgaac
720
acagtgggag acctcctagc ccaggaccaa gtcaccgagg cagaggaact tcttcaaat
780
ctgtttcagc agtccctgtc tgggccccag gcctcagtgg ggcttgagct gggcagcgga
840
gtgacggtct ccagcgggca gggatatcca cccctaccc gggggaatag caagccgctt
900
tcctgcttgc tggccccgga ctccggccgc ctgccatcca tccctgagaa caggaaccta
960
acggagctgg tgggtggcct gactgacgag aacatcgtgg ggctgttcgc ggcgctcctg
1020
gccgagagaa gagtcctgct caccgccagc aaactcagca ccctgaggcg gggccgccc
1080
ggccgggggtg ggagcagggc ctggctccgc cccggggggc gggacaaggg ggctgattcc
1140
ttgctctaac cctactgcgc gagaccgag ggcgaagtcc tggccccgcc ccttcgaagg
1200

```

tctttgagag ttttaactctn gccccgccct cttggg

1236

<210> 3574

<211> 361

<212> PRT

<213> Homo sapiens

<400> 3574

Pro	Gln	Ile	Lys	Gly	Ala	Val	Ser	Phe	Phe	Pro	Ala	Thr	Ser	Gly	Gln
1				5					10					15	
Asp	His	Pro	Pro	Cys	Leu	Leu	Pro	Lys	Ala	Gln	Pro	Ser	Ala	Pro	Pro
			20					25					30		
Ile	Asn	Pro	Ser	His	Thr	His	Ser	Pro	Ile	Phe	Ser	Ile	His	Ser	Gly
			35				40					45			
Thr	Cys	Val	Phe	Asn	Lys	Pro	Gly	Gly	His	Thr	Ala	Ser	His	Thr	His
	50					55					60				
Thr	Leu	Thr	Ala	Thr	Asn	Pro	Arg	Ser	His	Ala	His	Ala	Asp	Ala	Pro
65					70					75					80
Cys	Gly	Thr	Cys	Thr	His	Asn	His	Thr	Cys	Val	Gln	Ser	Gly	Arg	His
				85					90					95	
Thr	His	Thr	Cys	Ile	Glu	Ala	Ser	Leu	Trp	Thr	Pro	Ser	Ala	Ser	His
			100					105					110		
Arg	Gly	Gly	Ser	Pro	Ala	Val	Phe	Asp	Trp	Phe	Phe	Glu	Ala	Ala	Cys
			115				120					125			
Pro	Ala	Ser	Val	Gln	Glu	Asp	Pro	Pro	Ile	Leu	Arg	Gln	Phe	Pro	Pro
			130			135					140				
Asp	Phe	Arg	Asp	Gln	Glu	Ala	Met	Gln	Met	Val	Pro	Lys	Phe	Cys	Phe
145					150					155					160
Pro	Phe	Asp	Val	Glu	Arg	Gly	Pro	Pro	Ser	Pro	Ala	Val	Gln	His	Phe
				165					170					175	
Thr	Phe	Ala	Leu	Thr	Asp	Leu	Ala	Gly	Asn	Arg	Arg	Phe	Gly	Phe	Cys
			180					185					190		
Arg	Leu	Arg	Ala	Gly	Thr	Gln	Ser	Cys	Leu	Cys	Ile	Leu	Ser	His	Leu
		195					200						205		
Pro	Trp	Phe	Glu	Val	Phe	Tyr	Lys	Leu	Leu	Asn	Thr	Val	Gly	Asp	Leu
	210					215					220				
Leu	Ala	Gln	Asp	Gln	Val	Thr	Glu	Ala	Glu	Glu	Leu	Leu	Gln	Asn	Leu
225					230					235					240
Phe	Gln	Gln	Ser	Leu	Ser	Gly	Pro	Gln	Ala	Ser	Val	Gly	Leu	Glu	Leu
				245					250					255	
Gly	Ser	Gly	Val	Thr	Val	Ser	Ser	Gly	Gln	Gly	Ile	Pro	Pro	Pro	Thr
			260					265					270		
Arg	Gly	Asn	Ser	Lys	Pro	Leu	Ser	Cys	Phe	Val	Ala	Pro	Asp	Ser	Gly
		275					280					285			
Arg	Leu	Pro	Ser	Ile	Pro	Glu	Asn	Arg	Asn	Leu	Thr	Glu	Leu	Val	Val
	290					295					300				
Ala	Val	Thr	Asp	Glu	Asn	Ile	Val	Gly	Leu	Phe	Ala	Ala	Leu	Leu	Ala
305					310					315					320
Glu	Arg	Arg	Val	Leu	Leu	Thr	Ala	Ser	Lys	Leu	Ser	Thr	Leu	Arg	Arg
				325					330					335	
Gly	Pro	Pro	Gly	Arg	Gly	Gly	Ser	Arg	Ala	Trp	Leu	Arg	Pro	Gly	Gly
			340					345					350		
Arg	Asp	Lys	Gly	Ala	Asp	Ser	Leu	Leu							

355

360

<210> 3575
 <211> 769
 <212> DNA
 <213> Homo sapiens

<400> 3575
 tgatcagctc ctgtcggagt tcatcggcca tgaagaagga aggtgcgttt gctttcggtt
 60
 gcatataagc aacgtgaggt gcagttggag gataaatatg atagtttgga aacaccattc
 120
 cagtcaaagg tgctggagtt gtgtctgtat agaagtaagt cgtcccacca acagtttctt
 180
 tttggatcac ctgaccagaa gacggagtct gagaaacagg attattaaca gatgtagagg
 240
 cactagaagg caccatgtaa cttgctggat ttggagtgtg acttcttctt ctgggagcag
 300
 gagaagtatg tggagtaatc ttgggggaat gaagagggga agaccagca gacaacgaca
 360
 ttctgaaga ggatgtaaaa atgtttctta atggagcaat aattggtttt agagaacaag
 420
 tctggaaaat aaaatgcaaa cattcatttg gaagaaacat catctttggg atcgtaagtg
 480
 caaagatgaa ggaaataatt ttatcttggt ttgttgtaga aaaagctctg attaaagcaa
 540
 atgtaaagtt tcttttttca aatgtactta tttccaaata tgtagcaga tttactgcaa
 600
 gaatagtctc ctccatatca aggtttacat caggaaattt aatagcaaga gtgacaaaaa
 660
 atttaataaa ttaatggaag agtgggaagt aacagaattg tggctcttta taaaattatg
 720
 ccttttataa aagtttttct tttataaaag gcataattcc ttttttatt
 769

<210> 3576
 <211> 205
 <212> PRT
 <213> Homo sapiens

<400> 3576
 Met Glu Glu Thr Ile Leu Ala Val Asn Leu Leu Thr Tyr Leu Glu Ile
 1 5 10 15
 Ser Thr Phe Glu Lys Arg Asn Phe Thr Phe Ala Leu Ile Arg Ala Phe
 20 25 30
 Ser Thr Thr Lys Gln Asp Lys Ile Ile Ser Phe Ile Phe Ala Leu Thr
 35 40 45
 Ile Pro Lys Met Met Phe Leu Pro Asn Glu Cys Leu His Phe Ile Phe
 50 55 60
 Gln Thr Cys Ser Leu Lys Pro Ile Ile Ala Pro Leu Arg Asn Ile Phe
 65 70 75 80
 Thr Ser Ser Ser Gly Met Ser Leu Ser Ala Gly Ser Ser Pro Leu His
 85 90 95
 Ser Pro Lys Ile Thr Pro His Thr Ser Pro Ala Pro Arg Arg Arg Ser

agtgctaagc tacttgTTTT ctcacttgag cccgggtagg ctgtgttggc cctcacttgg
 1080
 gattctcagc agttacatga aagttgtgct gataatctct tctcttgtac caattttagt
 1140
 caggcagaaa atggtaaaca tgagggtgct cttgtgactt aatttttgtt caagggacta
 1200
 agttgcttat gtttattccc tgtca
 1225

<210> 3578

<211> 195

<212> PRT

<213> Homo sapiens

<400> 3578

Val	Asp	Ser	Ile	Asp	Arg	Gln	Phe	Glu	Phe	Ser	Val	Asp	Ser	Phe	Gln
1			5					10						15	
Ile	Ile	Leu	Asp	Ser	Leu	Leu	Phe	Phe	Tyr	Asp	Cys	Ser	Asn	Asn	Pro
		20						25					30		
Ile	Ser	Glu	His	Phe	His	Pro	Thr	Val	Ile	Gly	Glu	Ser	Met	Tyr	Gly
		35					40					45			
Asp	Phe	Glu	Glu	Ala	Phe	Asp	His	Leu	Gln	Asn	Arg	Leu	Ile	Ala	Thr
	50					55					60				
Lys	Asn	Pro	Glu	Glu	Ile	Arg	Gly	Gly	Gly	Leu	Leu	Lys	Tyr	Ser	Asn
65					70					75					80
Leu	Leu	Val	Arg	Asp	Phe	Arg	Pro	Thr	Asp	Gln	Glu	Glu	Ile	Lys	Thr
			85						90					95	
Leu	Glu	Arg	Tyr	Met	Cys	Ser	Arg	Phe	Phe	Ile	Asp	Phe	Pro	Asp	Ile
		100						105					110		
Leu	Glu	Gln	Gln	Arg	Lys	Leu	Glu	Thr	Tyr	Leu	Gln	Asn	His	Phe	Ala
		115					120					125			
Glu	Glu	Glu	Arg	Ser	Lys	Tyr	Asp	Tyr	Leu	Met	Ile	Leu	Arg	Arg	Val
	130					135					140				
Val	Asn	Glu	Ser	Thr	Val	Cys	Leu	Met	Gly	His	Glu	Arg	Arg	Gln	Thr
145					150					155					160
Leu	Asn	Leu	Ile	Ser	Leu	Leu	Ala	Leu	Arg	Val	Leu	Gly	Gly	Thr	Lys
			165						170					175	
His	His	Pro	Pro	Val	Pro	Pro	Arg	Ser	Pro	Val	Thr	Thr	Ser	Gly	Pro
			180					185						190	
Leu	Ser	Gln													
		195													

<210> 3579

<211> 755

<212> DNA

<213> Homo sapiens

<400> 3579

accggtgatg tcaactgagaa tgtttgctca cagtcaataa ttgtctttgt ggatgtgata
 60
 attttggaga tacacttctg gtcagaactc aggtgagata atcttgcaat actccaaatg
 120
 cagatactcc agccaccgcg aaggttccag gaaaggacaa tgtcctgcga gaaaatcagg
 180

aggcctccac ttcctgggcc acttgagaag ttcctgggca tgtcactaca tgttggttga
 240
 ctacgccatt tctcatgctg ttttgtttct tgcggtggcc acttaacccc aaagaatgaa
 300
 gggaggatcc acagtgaaag tgcctgagtt tctctatgag accagatgct gtcgaaacca
 360
 aacatctttt cctttgctct atgggaacat tttagggttt gttttgcaca gctggtttcc
 420
 agactagaag attaacaagt ttgggtccac ccctaagaat cagtggctgt cttttaaggt
 480
 gaggagtgtg ggcttaactg aggtcctttg agggagctat aaaggagaaa caacctggga
 540
 cateccagtt ttcctattcc tccactgtta atatctcatc taaaataatt catgagtta
 600
 aatggtaa at atagcttta agctctacct ttaaacttgt atgttattca ggcattctct
 660
 attaagatac tgggtctctg gataccaag gaaatgttgg ctttttattc ttatgtggtt
 720
 ccaaatttac ttctcttcag ttttaattgtc catgg
 755

<210> 3580

<211> 121

<212> PRT

<213> Homo sapiens

<400> 3580

Met	Phe	Gly	Phe	Asp	Ser	Ile	Trp	Ser	His	Arg	Glu	Thr	Gln	Ala	Leu
1				5					10					15	
Ser	Leu	Trp	Ile	Leu	Pro	Ser	Phe	Phe	Gly	Val	Lys	Trp	Pro	Pro	Gln
	20							25					30		
Glu	Thr	Lys	Gln	His	Glu	Lys	Trp	Leu	Ser	Gln	Pro	Thr	Cys	Ser	Asp
	35						40					45			
Met	Pro	Arg	Asn	Phe	Ser	Ser	Gly	Pro	Gly	Ser	Gly	Gly	Leu	Leu	Ile
	50					55					60				
Phe	Ser	Gln	Asp	Ile	Val	Leu	Ser	Trp	Asn	Leu	Ala	Gly	Gly	Trp	Ser
65					70				75				80		
Ile	Cys	Ile	Trp	Ser	Ile	Ala	Arg	Leu	Ser	His	Leu	Ser	Ser	Asp	Gln
			85					90					95		
Lys	Cys	Ile	Ser	Lys	Ile	Ile	Thr	Ser	Thr	Lys	Thr	Ile	Ile	Asp	Cys
		100					105						110		
Glu	Gln	Thr	Phe	Ser	Val	Thr	Ser	Arg							
		115					120								

<210> 3581

<211> 2132

<212> DNA

<213> Homo sapiens

<400> 3581

nnggcgcccg ggcgggtgctg cgctgccaga gcccgcgcat ggtgtggacc caggaccggc
 60
 tgcacgaccg ccagcgcgtg ctccactggg acctgcgcgg ccccgggggg ggccccgcgc
 120

ggcgctgct ggacttgtag tcggcgggcg agcagcgcg gtacgaggcg cgggaccgcg
180
gccgctgga gctctcggcc tcggccttcg acgacggcaa cttctcgctg ctcatccgcg
240
cggaggagga gacggacgcg gggctgtaca cctgcaacct gcaccatcac tactgccacc
300
tctacgagag cctggccgctc cgcctggagg tcaccgacgg ccccccggcc acccccgctt
360
actgggacgg cgagaaggag gtgctggcgg tggcgcgcg cgaccccgcg cttctgacct
420
gcgtgaaccg cgggcacgtg tggaccgacc ggcacgtgga ggagggtcaa cagggtggtgc
480
actgggaccg gcagccgccc ggggtcccg cgcacccgcg ggaccgctg ctggacctct
540
acgcgtcggg cgagcgccgc gcctacgggc ccctttttct gcgcgaccgc gtggctgtgg
600
gcgcggatgc ctttgagcgc ggtgacttct cactgcgtat cgagccgctg gaggtcgccg
660
acgagggcac ctactcctgc cacctgcacc accattactg tggcctgcac gaacgccgcg
720
tctccacct gacggtcgcc gaacccacg cggagccgcc cccccggggc tctccgggca
780
acggtccag ccacagcggc gcccaggcc cagacccac actggcgcg gccacaacg
840
tcatcaatgt catcgcccc gagagccgag ccacttctt ccagcagctg ggctacgtgc
900
tggccacgct gctgctcttc atcctgctac tggctactgt cctcctggcc gcccgaggc
960
gccgcggagg ctacgaatac tcggaccaga agtcgggaaa gtcaaagggg aaggatgtta
1020
acttggcgga gttcgctgtg gctgcagggg accagatgct ttacaggagt gaggacatcc
1080
agctagatta caaaaacaac atcctgaagg agagggcgga gctggccac agccccctgc
1140
ctgccaagta catcgacct gacaaaggt tccggaagga gaactgcaa tagggaggcc
1200
ctgggctcct ggctgggcca gcagctgcac ctctcctgtc tgtgctctc ggggcatctc
1260
ctgatgctcc ggggctcacc ccccttcag cggctggtcc cgctttctg gaatttggcc
1320
tggcggtatg cagaggccgc ctccacacc ctccccagg ggcttgggtg cagcatagcc
1380
cccaccctg cggcctttgc tcacgggtgg ccctgccac ccctggcaca accaaaatcc
1440
cactgatgcc catcatgcc tcagaccctt ctgggctctg cccgctgggg gcctgaagac
1500
attcctggag gacactccca tcagaacctg gcagcccaa aactggggtc agcctcaggg
1560
caggagtccc actcctccag ggtctgtct gtccggggct gggagatgtt cctggaggag
1620
gacactccca tcagaacttg gcagccttga agttggggtc agcctcggca ggagtccac
1680
tcctcctggg gtgctgcctg ccaccaagag ctccccacc tgtaccacca tgtgggactc
1740

caggcaccat ctgttctccc cagggacctg ctgacttgaa tgccagccct tgctcctctg
 1800
 tgttgctttg ggccacctgg ggctgcaccc cctgcccttt ctctgccccca tcctaccct
 1860
 agccttgctc tcagccacct tgatagtcac tgggctccct gtgacttctg accctgacac
 1920
 ccctcccttg gactctgect gggctggagt ctagggctgg ggctacattt ggcttctgta
 1980
 ctggctgagg acaggggagg gagtgaagtt ggtttggggg ggctgtgtt gccactctca
 2040
 gcacccacaca tttgcatctg ctggtggacc tgccaccatc acaataaagt ccccatctga
 2100
 tttttaaaaa aaaaaaaaaa aaaaaaaaaa aa
 2132

<210> 3582

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3582

Xaa	Ala	Pro	Gly	Arg	Cys	Cys	Ala	Ala	Arg	Ala	Arg	Ala	Trp	Cys	Gly
1				5					10					15	
Pro	Arg	Thr	Gly	Cys	Thr	Thr	Ala	Ser	Ala	Cys	Ser	Thr	Gly	Thr	Cys
			20					25					30		
Ala	Ala	Pro	Gly	Val	Ala	Pro	Arg	Gly	Ala	Cys	Trp	Thr	Cys	Thr	Arg
			35				40					45			
Arg	Ala	Ser	Ser	Ala	Cys	Thr	Arg	Arg	Gly	Thr	Ala	Ala	Ala	Trp	Ser
			50				55				60				
Ser	Arg	Pro	Arg	Pro	Ser	Thr	Thr	Ala	Thr	Ser	Arg	Cys	Ser	Ser	Ala
						70				75				80	
Arg	Trp	Arg	Arg	Arg	Thr	Arg	Gly	Cys	Thr	Pro	Ala	Thr	Cys	Thr	Ile
					85				90					95	
Thr	Thr	Ala	Thr	Ser	Thr	Arg	Ala	Trp	Pro	Ser	Ala	Trp	Arg	Ser	Pro
			100					105					110		
Thr	Ala	Pro	Arg	Pro	Pro	Pro	Pro	Thr	Gly	Thr	Ala	Arg	Arg	Arg	Cys
			115				120						125		
Trp	Arg	Trp	Arg	Ala	Ala	His	Pro	Arg	Phe						
			130				135								

<210> 3583

<211> 1554

<212> DNA

<213> Homo sapiens

<400> 3583

tcatgagggg agagaatggc gccattttgc ggtacggaag ctacacagca acacgtatag
 60
 gagactctcc ccgagatctt ctagggagtg acccatctat ttttgtttgg gaagaggaaa
 120
 ctccgaaatg ggatcgcgga agacttaaag ggccaggctg attttttttt cctactgcag
 180
 gtctctgagg ctgtggttgc tacagggcca ccacgagctt ggcttacttg tctcatcctt
 240

cccttgcttg gtatcatttt ctcagttctc ccaaaagcca tgtcccggcc cttgctcatc
 300
 accttcaccc cagccactga cccagcgac ctctggaagg atgggcagca gcagccacag
 360
 cccgagaagc cagagtcac cctggatggg gctgcagccc gagctttcta tgaggccctg
 420
 attggggatg agagcagcgc tctgactcc cagagatctc agactgaacc tgccagagaa
 480
 agaaagagaa agaaaagaag aataatgaag gcaccagcag cagaagcagt ggcagaagga
 540
 gcatcaggaa gacatggaca agggagatcc cttgaggctg aggataagat gactcaccgg
 600
 atactgaggg cagcccagga gggggacctg ccagaactta ggagactgct ggaaccgcat
 660
 gaggcaggag gagctggggg gaatatcaac gcccgggatg cttcttggtg gacccactg
 720
 atgtgtgctg ctcgagcggg ccagggggca gctgtgagct atctcctggg ccgtggggct
 780
 gcctgggtgg gggctctgtga gctgagtggc agggatgcgg ctcagctcgc tgaagaagct
 840
 ggcttccctg aggtagcccg catggtcagg gagagccatg gagagacaag gagcccggaa
 900
 aaccgggtct ctactccctc cctccagtac tgcgagaact gtgacacca cttccaagat
 960
 tccaaccacc gcacatccac tgctcacctg ctgtcactgt cgcaggggtcc tcagcctccc
 1020
 aaccttcac ttgggggtgcc catctccagc ccgggcttca aactgctgct gagggggggc
 1080
 tgggagccag gaatggggct gggaccccg ggtgagggcc gtgccaatcc catccccact
 1140
 gtcccaaga gggaccagga aggactagc tacagatcag caccacagcc ccgagtgaca
 1200
 catttcccag cttgggatac ccgagctgtg gctgggaggg agagaccccc tcgggtggcc
 1260
 aactgagct ggagggagga gagaaggagg gaggagaaag acagggcttg ggagcgggat
 1320
 ctaaggactt acatgaacct cgagttctga ctttggtaaa gtctgacct agtctgctgc
 1380
 tgaagtctga acttgggcct ctgacctgg ccctttgact tccccttctt gggatctgct
 1440
 cagatgcaga tccgaagtt tttggtcaat aggtctgtgc ttcgtgagag acgggctgag
 1500
 agtcagaaat aaatcaacca tttgtggttt aaaaaaaaaa aaaaacaaag tttt
 1554

<210> 3584

<211> 356

<212> PRT

<213> Homo sapiens

<400> 3584

Met Ser Arg Pro Leu Leu Ile Thr Phe Thr Pro Ala Thr Asp Pro Ser
 1 5 10 15
 Asp Leu Trp Lys Asp Gly Gln Gln Gln Pro Gln Pro Glu Lys Pro Glu

			20					25					30			
Ser	Thr	Leu	Asp	Gly	Ala	Ala	Ala	Arg	Ala	Phe	Tyr	Glu	Ala	Leu	Ile	
		35					40					45				
Gly	Asp	Glu	Ser	Ser	Ala	Pro	Asp	Ser	Gln	Arg	Ser	Gln	Thr	Glu	Pro	
	50					55					60					
Ala	Arg	Glu	Arg	Lys	Arg	Lys	Lys	Arg	Arg	Ile	Met	Lys	Ala	Pro	Ala	
65					70					75					80	
Ala	Glu	Ala	Val	Ala	Glu	Gly	Ala	Ser	Gly	Arg	His	Gly	Gln	Gly	Arg	
				85					90					95		
Ser	Leu	Glu	Ala	Glu	Asp	Lys	Met	Thr	His	Arg	Ile	Leu	Arg	Ala	Ala	
			100					105					110			
Gln	Glu	Gly	Asp	Leu	Pro	Glu	Leu	Arg	Arg	Leu	Leu	Glu	Pro	His	Glu	
		115					120					125				
Ala	Gly	Gly	Ala	Gly	Gly	Asn	Ile	Asn	Ala	Arg	Asp	Ala	Phe	Trp	Trp	
	130					135					140					
Thr	Pro	Leu	Met	Cys	Ala	Ala	Arg	Ala	Gly	Gln	Gly	Ala	Ala	Val	Ser	
145					150					155					160	
Tyr	Leu	Leu	Gly	Arg	Gly	Ala	Ala	Trp	Val	Gly	Val	Cys	Glu	Leu	Ser	
				165					170					175		
Gly	Arg	Asp	Ala	Ala	Gln	Leu	Ala	Glu	Glu	Ala	Gly	Phe	Pro	Glu	Val	
			180					185					190			
Ala	Arg	Met	Val	Arg	Glu	Ser	His	Gly	Glu	Thr	Arg	Ser	Pro	Glu	Asn	
		195					200					205				
Arg	Ser	Pro	Thr	Pro	Ser	Leu	Gln	Tyr	Cys	Glu	Asn	Cys	Asp	Thr	His	
	210					215					220					
Phe	Gln	Asp	Ser	Asn	His	Arg	Thr	Ser	Thr	Ala	His	Leu	Leu	Ser	Leu	
225					230					235					240	
Ser	Gln	Gly	Pro	Gln	Pro	Pro	Asn	Leu	Pro	Leu	Gly	Val	Pro	Ile	Ser	
				245					250					255		
Ser	Pro	Gly	Phe	Lys	Leu	Leu	Leu	Arg	Gly	Gly	Trp	Glu	Pro	Gly	Met	
			260					265					270			
Gly	Leu	Gly	Pro	Arg	Gly	Glu	Gly	Arg	Ala	Asn	Pro	Ile	Pro	Thr	Val	
		275					280					285				
Leu	Lys	Arg	Asp	Gln	Glu	Gly	Leu	Gly	Tyr	Arg	Ser	Ala	Pro	Gln	Pro	
	290					295					300					
Arg	Val	Thr	His	Phe	Pro	Ala	Trp	Asp	Thr	Arg	Ala	Val	Ala	Gly	Arg	
305					310					315					320	
Glu	Arg	Pro	Pro	Arg	Val	Ala	Thr	Leu	Ser	Trp	Arg	Glu	Glu	Arg	Arg	
				325					330					335		
Arg	Glu	Glu	Lys	Asp	Arg	Ala	Trp	Glu	Arg	Asp	Leu	Arg	Thr	Tyr	Met	
			340					345					350			
Asn	Leu	Glu	Phe													
		355			</											

<210> 3585

<211> 2782

<212> DNA

<213> Homo sapiens

<400> 3585

ncgcacgcgc agtcgtatcc gtgtgatggg cgggctgttg acggcgctgc gatggctgcc
60

tgcgagggca ggagaagcgg agctctcggg tctctcagt cggacttctt gacgccgcca
120

gtgggcgggg ccccttgggc cgtcgccacc actgtagtca tgtaccacc gccgcccgg
180
ccgcctcatc gggacttcat ctcggtgacg ctgagctttg gcgagagcta tgacaacagc
240
aagagttggc ggcggcgctc gtgctggagg aaatggaagc aactgtcgag attgcagcgg
300
aatatgattc tcttctcctc tgcctttctg cttttctgtg gactcctctt ctacatcaac
360
ttggctgacc attggaaagc tctggctttc aggctagagg aagagcagaa gatgaggcca
420
gaaattgctg ggttaaaacc agcaaaccac cccgtcttac cagctcctca gaaggcggac
480
accgaccctg agaacttacc tgagatttcg tcacagaaga cacaagaca catccagcgg
540
ggaccacctc acctgcagat tagaccccca agccaagacc tgaaggatgg gaccagagg
600
gagggcaca aaaggcaaga agcccctgtg gatccccgcc cggaaggaga tccgcagagg
660
acagtcata gctggagggg agcgtgatc gagcctgagc agggcaccga gctcccttca
720
agaagagcag aagtgcacc caagcctccc ctgccaccgg ccaggacaca gggcacacca
780
gtgcatctga actatcgcca gaaggcgctg attgacgtct tctgcatgc atggaaagga
840
taccgcaagt ttgcatgggg ccatgacgag ctgaagcctg tgtccaggtc cttcagtgag
900
tggtttggcc tcggtctcac actgatcgac gcgctggaca ccatgtggat cttgggtctg
960
aggaaagaat ttgaggaagc caggaagtgg gtgtcgaaga agttacactt tgaaaaggac
1020
gtggacgtca acctgtttga gagcacgac cgcacctctg gggggctcct gagtgcctac
1080
cacctgtctg gggacagcct cttcctgagg aaagctgagg attttggaat tcggctaattg
1140
cctgccttca gaacaccatc caagattcct tactcggatg tgaacatcgg tactggagtt
1200
gccacccgc cacgggtggac ctccgacagc actgtggccg aggtgaccag cattcagctg
1260
gagttccggg agctctcccg tctcacaggg gataagaagt ttcaggaggc agtgagagaag
1320
gtgacacagc acatccacgg cctgtctggg aagaaggatg ggctggtgcc catgttcatc
1380
aataccaca gtggcctctt caccacctg ggcgtattca cgctggggcg cagggccgac
1440
agctactatg agtacctgct gaagcagtgg atccaggggc ggaagcagga gacacagctg
1500
ctggaagact acgtggaagc catcgagggt gtcagaacgc acctgctgcg gcactccgag
1560
cccagtaagc tcaccttctg gggggagctt gccacggcc gcttcagtgc caagatggac
1620
cacctggtgt gcttctgcc agggacgctg gctctgggcg tctaccacgg cctgcccgc
1680
agccacatgg agctggccca ggagctcatg gagacttgtt accagatgaa ccggcagatg
1740

gagacggggc tgagtcccgga gatcgtgcac ttcaaccttt acccccagcc gggccgctcgg
 1800
 gacgtggagg tcaagccagc agacaggcac aacctgctgc ggccagagac cgtggagagc
 1860
 ctgttctacc tgtaccgctg cacaggggac cgcaaatacc aggactgggg ctgggagatt
 1920
 ctgcagagct tcagccgatt cacacgggtc ccctcgggtg gctattcttc catcaacaat
 1980
 gtccaggatc ctcagaagcc cgagcctagg gacaagatgg agagcttctt cctggggggag
 2040
 acgtcaagt atctgttctt gctcttctcc gatgacccaa acctgctcag cctggacgcc
 2100
 tacgtgttca acaccgaagc ccaccctctg cctatctgga ccctgccta ggggtgatgg
 2160
 ctgctggtgt ggggacttcg ggtgggcaga ggcaccttgc tgggtctgtg gcattttcca
 2220
 agggcccacg tagcaccggc aaccgccaag tggcccaggc tctgaactgg ctctgggctc
 2280
 ctctcgtct ctgctttaat caggacaccg tgaggacaag tgaggccgtc agtcttggtg
 2340
 tgatgcgggg tgggctgggc cgctggagcc tccgcctgct tcctccagaa gacacgaatc
 2400
 atgactcacg attgctgaag cctgagcagg tctctgtggg ccgaccagag gggggcttcg
 2460
 aggtgggtccc tgggtactggg gtgaccgagt ggacagccca ggggtgcagct ctgcccgggc
 2520
 tcgtgaagcc tcagatgtcc ccaatccaag ggtctggagg ggctgccgtg actccagagg
 2580
 cctgaggctc cagggtgggc tctggtgttt acaagctgga ctgaggatc ctctggccg
 2640
 cccgcaggg ggcttgagg gctggacggc aagtccgtct agctcacggg cccctccagt
 2700
 ggaatgggtc ttttcggtgg agataaaaagt tgatttgctc taaaaaaaaa aaaaaaaaaa
 2760
 aaaaaaaaaa aaaaaaaaaa aa
 2782

<210> 3586

<211> 663

<212> PRT

<213> Homo sapiens

<400> 3586

Met Tyr Pro Pro Pro Pro Pro Pro Pro His Arg Asp Phe Ile Ser Val
 1 5 10 15
 Thr Leu Ser Phe Gly Glu Ser Tyr Asp Asn Ser Lys Ser Trp Arg Arg
 20 25 30
 Arg Ser Cys Trp Arg Lys Trp Lys Gln Leu Ser Arg Leu Gln Arg Asn
 35 40 45
 Met Ile Leu Phe Leu Leu Ala Phe Leu Leu Phe Cys Gly Leu Leu Phe
 50 55 60
 Tyr Ile Asn Leu Ala Asp His Trp Lys Ala Leu Ala Phe Arg Leu Glu
 65 70 75 80
 Glu Glu Gln Lys Met Arg Pro Glu Ile Ala Gly Leu Lys Pro Ala Asn

													85																90																95		
Pro	Pro	Val	Leu				Pro	Ala	Pro	Gln	Lys	Ala	Asp	Thr	Asp				Pro	Glu	Asn																										
				100						105						110																															
Leu	Pro	Glu	Ile	Ser	Ser	Gln	Lys	Thr	Gln	Arg	His	Ile	Gln	Arg	Gly				Gln	Arg	Gly																										
				115			120						125																																		
Pro	Pro	His	Leu	Gln	Ile	Arg	Pro	Pro	Ser	Gln	Asp	Leu	Lys	Asp	Gly																																
				130			135						140																																		
Thr	Gln	Glu	Glu	Ala	Thr	Lys	Arg	Gln	Glu	Ala	Pro	Val	Asp	Pro	Arg																																
				145			150						155			160																															
Pro	Glu	Gly	Asp	Pro	Gln	Arg	Thr	Val	Ile	Ser	Trp	Arg	Gly	Ala	Val																																
				165			170						175																																		
Ile	Glu	Pro	Glu	Gln	Gly	Thr	Glu	Leu	Pro	Ser	Arg	Arg	Ala	Glu	Val																																
				180			185						190																																		
Pro	Thr	Lys	Pro	Pro	Leu	Pro	Pro	Ala	Arg	Thr	Gln	Gly	Thr	Pro	Val																																
				195			200						205																																		
His	Leu	Asn	Tyr	Arg	Gln	Lys	Gly	Val	Ile	Asp	Val	Phe	Leu	His	Ala																																
				210			215						220																																		
Trp	Lys	Gly	Tyr	Arg	Lys	Phe	Ala	Trp	Gly	His	Asp	Glu	Leu	Lys	Pro																																
				225			230						235			240																															
Val	Ser	Arg	Ser	Phe	Ser	Glu	Trp	Phe	Gly	Leu	Gly	Leu	Thr	Leu	Ile																																
				245			250						255																																		
Asp	Ala	Leu	Asp	Thr	Met	Trp	Ile	Leu	Gly	Leu	Arg	Lys	Glu	Phe	Glu																																
				260			265						270																																		
Glu	Ala	Arg	Lys	Trp	Val	Ser	Lys	Lys	Leu	His	Phe	Glu	Lys	Asp	Val																																
				275			280						285																																		
Asp	Val	Asn	Leu	Phe	Glu	Ser	Thr	Ile	Arg	Ile	Leu	Gly	Gly	Leu	Leu																																
				290			295						300																																		
Ser	Ala	Tyr	His	Leu	Ser	Gly	Asp	Ser	Leu	Phe	Leu	Arg	Lys	Ala	Glu																																
				305			310						315			320																															
Asp	Phe	Gly	Asn	Arg	Leu	Met	Pro	Ala	Phe	Arg	Thr	Pro	Ser	Lys	Ile																																
				325			330						335																																		
Pro	Tyr	Ser	Asp	Val	Asn	Ile	Gly	Thr	Gly	Val	Ala	His	Pro	Pro	Arg																																
				340			345						350																																		
Trp	Thr	Ser	Asp	Ser	Thr	Val	Ala	Glu	Val	Thr	Ser	Ile	Gln	Leu	Glu																																
				355			360						365																																		
Phe	Arg	Glu	Leu	Ser	Arg	Leu	Thr	Gly	Asp	Lys	Lys	Phe	Gln	Glu	Ala																																
				370			375						380																																		
Val	Glu	Lys	Val	Thr	Gln	His	Ile	His	Gly	Leu	Ser	Gly	Lys	Lys	Asp																																
				385			390						395			400																															
Gly	Leu	Val	Pro	Met	Phe	Ile	Asn	Thr	His	Ser	Gly	Leu	Phe	Thr	His																																
				405			410						415																																		
Leu	Gly	Val	Phe	Thr	Leu	Gly	Ala	Arg	Ala	Asp	Ser	Tyr																																			

515	520	525
Thr Gly Leu Ser Pro Glu Ile Val His Phe Asn Leu Tyr Pro Gln Pro		
530	535	540
Gly Arg Arg Asp Val Glu Val Lys Pro Ala Asp Arg His Asn Leu Leu		
545	550	555
Arg Pro Glu Thr Val Glu Ser Leu Phe Tyr Leu Tyr Arg Val Thr Gly		
565	570	575
Asp Arg Lys Tyr Gln Asp Trp Gly Trp Glu Ile Leu Gln Ser Phe Ser		
580	585	590
Arg Phe Thr Arg Val Pro Ser Gly Gly Tyr Ser Ser Ile Asn Asn Val		
595	600	605
Gln Asp Pro Gln Lys Pro Glu Pro Arg Asp Lys Met Glu Ser Phe Phe		
610	615	620
Leu Gly Glu Thr Leu Lys Tyr Leu Phe Leu Leu Phe Ser Asp Asp Pro		
625	630	635
Asn Leu Leu Ser Leu Asp Ala Tyr Val Phe Asn Thr Glu Ala His Pro		
645	650	655
Leu Pro Ile Trp Thr Pro Ala		
660		

<210> 3587

<211> 3148

<212> DNA

<213> Homo sapiens

<400> 3587

```

nctttttttt ttttttttga gtgtgggggtc agtttattgg gcatgcgtca gtcagaggct
60
gggctggcca gggctgggta gggcagcagt ttgtctggac cccgagaaac ccaactggaa
120
tccagggcct catctgcttc aaagccaaag tcttctcaa ccttaatctg caccggggcc
180
agctctggag tcagcgcatt tcctgctcgg cgtccatccc gtggcactcg ccgcctcttc
240
cgccactgg gccctcacc gggggctggg ctgccgggtt ctgggggtgc aggagtcctt
300
ctgggcgggg acagtgtctc tttctctgga ggctcattct ccgcattgcc tgggggtggg
360
gcatccgtgc cctggetgcc ctcatectcc agcacaatgg tgaactggct ggcccggtag
420
tcacccccgt aggagtccag cactctcatg aggaacctcc gttcctgctg cagcctccga
480
gttatectct gcacctgatg gagcctgttc aggaccgct cgttcacctg ctcgatctcc
540
cggcagcgcc gacctagtgc ctgggtacttt ctgcgattta attcccgtg gcgcccgcgc
600
cgaccccggt ctgcctcttc ctcttcatct cgctcccggg gccctgagcc gccagacca
660
cctgacacaa actccacttc cgtctccagc tcgctctcca ggatgtggcc accaaatagg
720
ggaggcaacg ccaactctga gcctggcggc gctgagaact cctcaaagcc cacggctgcc
780
atggtccctt ctctctgctc caattccate tccgcgacct ccggaagccc cgggcctcag
840

```

agcttccgac ctcttcaatc tgtagggttaa gccgttcgca aaactacttg tcccatcagg
900
ctcagcagcc gaggacggcg ggacgtggcc ctaggccttg tgggagttgt agtttcctgt
960
ttccggcttc gcttcggccc acccccacgt ccaccccgaa tccctgctta aaggccttgc
1020
tttcttgtct aacgccgcaa ccagtcctct gagttgcaa cgtctttctt cttgtctcga
1080
cgccccgtcg tccggccaca gcgattctct gcttagcagg atcgggtccac agcgggacgt
1140
gagtctcttt cctcctcgcg gcttaccgct ctctccgcct agtgccaggt gctaataaag
1200
ttgttgtttc aaatgcggcc aggaacatcg cgagcgggga ccaatcagag agtagctttg
1260
cctctataac ggcgcgagag tgagacgtca tcggtgagcg actaacgcta gaaacagtgg
1320
tgcgcgagaga ggagaggcct cgggatgtct ctggcagatg agctcttagc tgatctcgaa
1380
gaggcagcag aagaggagga aggaggaagc tatggggagg aagaagagga gccagcgatc
1440
gaggatgtgc aggaggagac acagctggat ctttccgggg attcagtcaa gaccatcgcc
1500
aagctatggg atagtaagat gtttgctgag attatgatga agattgagga gtatatcage
1560
aagcaagcca aagcttcaga agtgatggga ccagtgaggg ccgcgcctga ataccgcgtc
1620
atcgtggatg ccaacaacct gaccgtggag atcgaaaacg agctgaacat catccataag
1680
ttcatccggg ataagtactc aaagagattc cctgaactgg agtccttggt cccaatgca
1740
ctggattaca tccgcacggt caaggagctg ggcaacagcc tggacaagtg caagaacaat
1800
gagaaacctgc agcagatcct caccaatgcc accatcatgg tcgtcagcgt caccgcctcc
1860
accacccagg ggcagcagct gtcggaggag gagctggagc ggctggagga ggctgcgac
1920
atggcgctgg agctgaacgc ctccaagcac cgcactctacg agtatgtgga gtcccggatg
1980
tccttcacg caccacaacct gtccatcatt atcggggcat ccacggccgc caagatcatg
2040
ggtgtggccg ggggcctgac caacctctcc aagatgcccg cctgcaacat catgctgctc
2100
ggggcccagc gcaagacgct gtcgggcttc tcgtctacct cagtgtctgc ccacaccggc
2160
tacatctacc acagtgacat cgtgcagtc ctgccaccgg atctgcggcg gaaagcggcc
2220
cggctggtgg ccgccaagtg cacactggca gccgtgtgg acagtttcca cgagagcaca
2280
gaagggaagg tgggctacga actgaaggat gagatcgagc gcaaattcga caagtggcag
2340
gagccgccgc ctgtgaagca ggtgaagccg ctgcctgcgc ccctggatgg acagcggaa
2400
aagcgaggcg gccgcaggta ccgcaagatg aaggagcggc tggggctgac ggagatccgg
2460

aagcaggcca accgtatgag cttcggagag atcgaggagg acgcctacca ggaggacctg
 2520
 ggattcagcc tgggccacct gggcaagtcg ggcagtgggc gtgtgcggca gacacaggta
 2580
 aacgaggcca ccaaggccag gatctccaag acgctgcagc ggaccctgca gaagcagagc
 2640
 gtcgtatatg gcggaagtc caccatccgc gaccgctcct cgggcacggc ctccagcgtg
 2700
 gccttcaccc cactccaggc cctggagatt gtgaaccac aggcggcaga gaagaagggtg
 2760
 gctgaggcca accagaagta tttctccagc atggctgagt tcctcaaggt caagggcgag
 2820
 aagagtggcc ttatgtccac ctgaatgact gcgtgtgtcc aaggtggctt cccactgaag
 2880
 ggacacagag gtccagtcct tctgaagggc taggatcggg ttctggcagg gagaacctgc
 2940
 cctgccactg gcccattgc tgggactgcc cagggaggag gccttggag agtccggcct
 3000
 ggccctcccc aggaccgaga tcaccgcca gtatgggcta gagcaggtct tcacatgcc
 3060
 ttgtcttttt taactgagaa aggagatttt ttgaaaagag tacaattaaa aggacattgt
 3120
 caagatctgt caaaaaaaaa aaaaaaaaa
 3148

<210> 3588

<211> 499

<212> PRT

<213> Homo sapiens

<400> 3588

Met	Ser	Leu	Ala	Asp	Glu	Leu	Leu	Ala	Asp	Leu	Glu	Glu	Ala	Ala	Glu
1				5					10					15	
Glu	Glu	Glu	Gly	Gly	Ser	Tyr	Gly	Glu	Glu	Glu	Glu	Glu	Pro	Ala	Ile
			20					25					30		
Glu	Asp	Val	Gln	Glu	Glu	Thr	Gln	Leu	Asp	Leu	Ser	Gly	Asp	Ser	Val
		35					40					45			
Lys	Thr	Ile	Ala	Lys	Leu	Trp	Asp	Ser	Lys	Met	Phe	Ala	Glu	Ile	Met
	50					55					60				
Met	Lys	Ile	Glu	Glu	Tyr	Ile	Ser	Lys	Gln	Ala	Lys	Ala	Ser	Glu	Val
65					70					75				80	
Met	Gly	Pro	Val	Glu	Ala	Ala	Pro	Glu	Tyr	Arg	Val	Ile	Val	Asp	Ala
			85					90						95	
Asn	Asn	Leu	Thr	Val	Glu	Ile	Glu	Asn	Glu	Leu	Asn	Ile	Ile	His	Lys
			100					105					110		
Phe	Ile	Arg	Asp	Lys	Tyr	Ser	Lys	Arg	Phe	Pro	Glu	Leu	Glu	Ser	Leu
		115					120					125			
Val	Pro	Asn	Ala	Leu	Asp	Tyr	Ile	Arg	Thr	Val	Lys	Glu	Leu	Gly	Asn
	130					135					140				
Ser	Leu	Asp	Lys	Cys	Lys	Asn	Asn	Glu	Asn	Leu	Gln	Gln	Ile	Leu	Thr
145				150						155				160	
Asn	Ala	Thr	Ile	Met	Val	Val	Ser	Val	Thr	Ala	Ser	Thr	Thr	Gln	Gly
			165					170						175	
Gln	Gln	Leu	Ser	Glu	Glu	Glu	Leu	Glu	Arg	Leu	Glu	Glu	Ala	Cys	Asp

			180				185				190				
Met	Ala	Leu	Glu	Leu	Asn	Ala	Ser	Lys	His	Arg	Ile	Tyr	Glu	Tyr	Val
			195				200				205				
Glu	Ser	Arg	Met	Ser	Phe	Ile	Ala	Pro	Asn	Leu	Ser	Ile	Ile	Ile	Gly
			210				215				220				
Ala	Ser	Thr	Ala	Ala	Lys	Ile	Met	Gly	Val	Ala	Gly	Gly	Leu	Thr	Asn
225				230				235				240			
Leu	Ser	Lys	Met	Pro	Ala	Cys	Asn	Ile	Met	Leu	Leu	Gly	Ala	Gln	Arg
			245				250				255				
Lys	Thr	Leu	Ser	Gly	Phe	Ser	Ser	Thr	Ser	Val	Leu	Pro	His	Thr	Gly
			260				265				270				
Tyr	Ile	Tyr	His	Ser	Asp	Ile	Val	Gln	Ser	Leu	Pro	Pro	Asp	Leu	Arg
			275				280				285				
Arg	Lys	Ala	Ala	Arg	Leu	Val	Ala	Ala	Lys	Cys	Thr	Leu	Ala	Ala	Arg
			290				295				300				
Val	Asp	Ser	Phe	His	Glu	Ser	Thr	Glu	Gly	Lys	Val	Gly	Tyr	Glu	Leu
305				310				315				320			
Lys	Asp	Glu	Ile	Glu	Arg	Lys	Phe	Asp	Lys	Trp	Gln	Glu	Pro	Pro	Pro
			325				330				335				
Val	Lys	Gln	Val	Lys	Pro	Leu	Pro	Ala	Pro	Leu	Asp	Gly	Gln	Arg	Lys
			340				345				350				
Lys	Arg	Gly	Gly	Arg	Arg	Tyr	Arg	Lys	Met	Lys	Glu	Arg	Leu	Gly	Leu
			355				360				365				
Thr	Glu	Ile	Arg	Lys	Gln	Ala	Asn	Arg	Met	Ser	Phe	Gly	Glu	Ile	Glu
			370				375				380				
Glu	Asp	Ala	Tyr	Gln	Glu	Asp	Leu	Gly	Phe	Ser	Leu	Gly	His	Leu	Gly
385				390				395				400			
Lys	Ser	Gly	Ser	Gly	Arg	Val	Arg	Gln	Thr	Gln	Val	Asn	Glu	Ala	Thr
			405				410				415				
Lys	Ala	Arg	Ile	Ser	Lys	Thr	Leu	Gln	Arg	Thr	Leu	Gln	Lys	Gln	Ser
			420				425				430				
Val	Val	Tyr	Gly	Gly	Lys	Ser	Thr	Ile	Arg	Asp	Arg	Ser	Ser	Gly	Thr
			435				440				445				
Ala	Ser	Ser	Val	Ala	Phe	Thr	Pro	Leu	Gln	Gly	Leu	Glu	Ile	Val	Asn
			450				455				460				
Pro	Gln	Ala	Ala	Glu	Lys	Val	Ala	Glu	Ala	Asn	Gln	Lys	Tyr	Phe	
465				470				475				480			
Ser	Ser	Met	Ala	Glu	Phe	Leu	Lys	Val	Lys	Gly	Glu	Lys	Ser	Gly	Leu
			485				490				495				
Met	Ser	Thr													

```
<210> 3589
<211> 675
<212> DNA
<213> Homo sapiens
```

```
<400> 3589
tggtaaaaat ggtgaagaca ctggtgatgg caatggtgaa atgggaatgc cattgtgggt
60
catgaaatcg aaggtcatgg ttatggtggg aacaggaaca agcagaggca acttcctgag
120
aatagttctt gaccocaggtc cctccatgaa cctcgaaagct gaccocagcca taggggggat
180
```

accttcattt cagtcccagc agcctccccc aaccagtcag ggtccctgaa gagcatctgg
 240
 ctctccacaa gacaatagac aggaagggga cccagtggcc cccccaagct tagctaattg
 300
 gagtgaagaa ccaggcagaa cccaggcagc agatgggata ggagtttcca agccagtgtg
 360
 tggggatagg ccctcccaat tcagaaacaa agcaaggccc tggccacagc caggaaggat
 420
 tgtaagggcc ttcctgagca gacacaaagg agccctgagc tgctgggggt gatgaggagc
 480
 ggaggcaggg ccaggcagag ggtctgcaaa gaattacact ggaaaggtgg aagggggaca
 540
 ttgggtctag tggtttggcc tgtggagagc tgtcaggaga ggggaggatg aggttgggtg
 600
 agacgcctga ggcaaggggtg tttgggggtc ttgttggcag catggtggca aaaggctcca
 660
 gaggcagcca cgcgt
 675

<210> 3590

<211> 117

<212> PRT

<213> Homo sapiens

<400> 3590

Met	Leu	Pro	Thr	Arg	Pro	Pro	Asn	Thr	Leu	Ala	Ser	Gly	Val	Ser	Thr
1				5					10					15	
Asn	Leu	Ile	Leu	Pro	Ser	Pro	Asp	Ser	Ser	Pro	Gln	Ala	Lys	Pro	Leu
			20					25					30		
Asp	Pro	Met	Ser	Pro	Phe	His	Leu	Ser	Ser	Val	Ile	Leu	Cys	Arg	Pro
		35					40					45			
Ser	Ala	Trp	Pro	Cys	Leu	Arg	Ser	Ser	Ser	Pro	Pro	Ala	Ala	Gln	Gly
	50					55					60				
Ser	Phe	Val	Ser	Ala	Gln	Glu	Gly	Pro	Tyr	Asn	Pro	Ser	Trp	Leu	Trp
65					70					75				80	
Pro	Gly	Pro	Cys	Phe	Val	Ser	Glu	Leu	Gly	Gly	Pro	Ile	Pro	Lys	His
				85					90					95	
Trp	Leu	Gly	Asn	Ser	Tyr	Pro	Ile	Cys	Cys	Leu	Gly	Ser	Ala	Trp	Phe
			100					105					110		
Phe	Thr	His	Ile	Ser											
			115												

<210> 3591

<211> 669

<212> DNA

<213> Homo sapiens

<400> 3591

nacgcgtgct ctgcgcttgc catgagactc ctgggagccg cagccgtcgc ggctctgggg
 60
 cgcggaaggg cccccgcctc cctaggctgg cagaggaagc aggttaattg gaaggcctgc
 120
 cgatggtctt catcaggggt gattcctaata gaaaaaatac gaaatattgg aatctcagct
 180

cacattgatt ctgggaaaac tacattaaca gaacgagtcc ttactacac tggcagaatt
 240
 gcaaagatgc atgaggtgaa aggtaaagat ggagttggtg ctgtcatgga ttccatggaa
 300
 cttagagagac aaagaggaat cactattcag tcagcagcca cttacaccat gtggaaagat
 360
 gtcaatatta acattataga tactcctggg catgtggact tcacaataga agtggaaagg
 420
 gccctgagag tggtggatgg tgcagtcctt gttctctgtg ctgttggagg ggtacagtgc
 480
 cagaccatga ctgtcaatcg tcagatgaag cgctacaacg ttccgtttct aacttttatt
 540
 aacaaattgg accgaatggg ctccaaccca gccaggggccc tgcagcaaat gaggtctaaa
 600
 ctaaatacata atgcagcgtt tatgcagata cccatggggtt tggagggtaa ttttaaagg
 660
 attgtagat
 669

<210> 3592

<211> 223

<212> PRT

<213> Homo sapiens

<400> 3592

Xaa	Ala	Cys	Ser	Ala	Leu	Ala	Met	Arg	Leu	Leu	Gly	Ala	Ala	Ala	Val
1				5					10					15	
Ala	Ala	Leu	Gly	Arg	Gly	Arg	Ala	Pro	Ala	Ser	Leu	Gly	Trp	Gln	Arg
		20						25					30		
Lys	Gln	Val	Asn	Trp	Lys	Ala	Cys	Arg	Trp	Ser	Ser	Ser	Gly	Val	Ile
		35					40					45			
Pro	Asn	Glu	Lys	Ile	Arg	Asn	Ile	Gly	Ile	Ser	Ala	His	Ile	Asp	Ser
	50					55					60				
Gly	Lys	Thr	Thr	Leu	Thr	Glu	Arg	Val	Leu	Tyr	Tyr	Thr	Gly	Arg	Ile
65				70						75				80	
Ala	Lys	Met	His	Glu	Val	Lys	Gly	Lys	Asp	Gly	Val	Gly	Ala	Val	Met
			85					90						95	
Asp	Ser	Met	Glu	Leu	Glu	Arg	Gln	Arg	Gly	Ile	Thr	Ile	Gln	Ser	Ala
		100						105					110		
Ala	Thr	Tyr	Thr	Met	Trp	Lys	Asp	Val	Asn	Ile	Asn	Ile	Ile	Asp	Thr
		115					120					125			
Pro	Gly	His	Val	Asp	Phe	Thr	Ile	Glu	Val	Glu	Arg	Ala	Leu	Arg	Val
	130					135					140				
Leu	Asp	Gly	Ala	Val	Leu	Val	Leu	Cys	Ala	Val	Gly	Gly	Val	Gln	Cys
145				150						155				160	
Gln	Thr	Met	Thr	Val	Asn	Arg	Gln	Met	Lys	Arg	Tyr	Asn	Val	Pro	Phe
			165					170						175	
Leu	Thr	Phe	Ile	Asn	Lys	Leu	Asp	Arg	Met	Gly	Ser	Asn	Pro	Ala	Arg
		180					185						190		
Ala	Leu	Gln	Gln	Met	Arg	Ser	Lys	Leu	Asn	His	Asn	Ala	Ala	Phe	Met
	195						200					205			
Gln	Ile	Pro	Met	Gly	Leu	Glu	Gly	Asn	Phe	Lys	Gly	Ile	Val	Asp	
	210						215							220	

<210> 3593
 <211> 1005
 <212> DNA
 <213> Homo sapiens

<400> 3593
 gaacgaaaga tggcggcgcc cgtaaggcgg acgctgttag ggggtggcggg ggggtggcgg
 60
 cggttcgaga ggctctgggc cggcagtccta agctctcgca gcctggctct tgcagccgca
 120
 ccctcaagca acggatcccc atggcgcttg ttgggcgcgt tgtgcctgca gcggccacct
 180
 gtagtctcca agccgttgac cccattgcag gaagagatgg cgtctctact gcagcagatt
 240
 gagatagaga gaagcctgta ttcagaccac gagcttcgtg ctctggatga aaaccagcga
 300
 ctggcaaaga agaaagctga ccttcattgat gaagaagatg aacaggatat attgctggcg
 360
 caagatttgg aagatatgtg ggagcagaaa tttctacagt tcaaacttgg agctcgcata
 420
 acagaagctg atgaaaagaa tgaccgaaca tccctgaaca ggaagctaga caggaacctt
 480
 gtccgtttag tcagagagaa gtttggagac caggatgttt ggatactgcc ccaggcagag
 540
 tggcagcctg gggagaccct tcgaggaaca gctgaacgaa ccttggccac actctcagaa
 600
 aacaacatgg aagccaagtt cctaggaaat gcacctgtg ggcactacac attcaagttc
 660
 ccccaggcaa tgcggacaga gagtaacctc ggagccaagg tgttcttctt caaagcactg
 720
 ctattaactg gagacttttc ccaggctggg aataagggcc atcatgtgtg ggtcactaag
 780
 gatgagctgg gtgactatth gaaacaaaaa tacctggccc aagttaggag gtttgtttca
 840
 gacctctgat gggccgagct gcctgtggac ggtgctcaga caagtctggg attagagcct
 900
 caaggacatt gtgtgattgc ctacatttg caggtaatat caagcagcaa actaaattct
 960
 gagaaataaa cgagtctatt actgaaaaaa aaaaaaaaaa aaaaa
 1005

<210> 3594
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 3594
 Glu Arg Lys Met Ala Ala Pro Val Arg Arg Thr Leu Leu Gly Val Ala
 1 5 10 15
 Gly Gly Trp Arg Arg Phe Glu Arg Leu Trp Ala Gly Ser Leu Ser Ser
 20 25 30
 Arg Ser Leu Ala Leu Ala Ala Ala Pro Ser Ser Asn Gly Ser Pro Trp
 35 40 45
 Arg Leu Leu Gly Ala Leu Cys Leu Gln Arg Pro Pro Val Val Ser Lys

50		55		60			
Pro	Leu	Thr	Pro	Leu	Gln	Gln	Ile
65		70		75		80	
Glu	Ile	Glu	Arg	Ser	Leu	Arg	Ala
		85		90		95	
Glu	Asn	Gln	Arg	Leu	Ala	Lys	Lys
		100		105		110	
Asp	Glu	Gln	Asp	Ile	Leu	Leu	Ala
		115		120		125	
Gln	Lys	Phe	Leu	Gln	Phe	Lys	Leu
		130		135		140	
Glu	Lys	Asn	Asp	Arg	Thr	Ser	Leu
145		150		155		160	
Val	Leu	Leu	Val	Arg	Glu	Lys	Phe
		165		170		175	
Pro	Gln	Ala	Glu	Trp	Gln	Pro	Gly
		180		185		190	
Arg	Thr	Leu	Ala	Thr	Leu	Ser	Glu
		195		200		205	
Gly	Asn	Ala	Pro	Cys	Gly	His	Tyr
		210		215		220	
Arg	Thr	Glu	Ser	Asn	Leu	Gly	Ala
225		230		235		240	
Leu	Leu	Thr	Gly	Asp	Phe	Ser	Gln
		245		250		255	
Trp	Val	Thr	Lys	Asp	Glu	Leu	Gly
		260		265		270	
Ala	Gln	Val	Arg	Arg	Phe	Val	Ser
		275		280			

<210> 3595

<211> 1903

<212> DNA

<213> Homo sapiens

<400> 3595

```

ttccaggtga cccgggggga ctacgcgcc atcctccaga aggtggtgga gcagctggag
60
aaagccaagg cctatgcagc caacagccac caggggcaga tgctggccca gtatatagag
120
agcttcaccc agggctccat cgaggccac aagaggggct cccgcttctg gatccaggac
180
aaaggcccca tcgtggagag ttacatcggg ttcacgcaga gctaccgcga cccctttggt
240
tcccaggagg aatttgaagg ttctgtagct gtggtgaaca aggccatgag tgccaagttt
300
gagcggctgg tggcgagcgc agagcagctg ctgaaggagc tgccctggcc cccaaccttt
360
gagaaggaca agttcctcac cctgacttc acctccctgg atgttctcac cttcgctggc
420
tccggcatcc ctgccggcat caacatcccc aactacgatg atctgaggca gacggaaggc
480
ttaagaacg tgctgctggg gaatgtgctg gctgtggcct acgccacgca gcgggagaag
540

```

cttacctttc tggaggagga tgacaaggac ctgtacatcc tctggaaggg gccctccttc
600
gatgtgcagg tgggcctgca cgagctgctg ggccatggca gtggcaagct cttcgtacag
660
gacgaaaaag gagcattcaa ctttgaccag gaaacagtga tcaaccaga gacgggcgag
720
cagattcaga gctgggtatcg gagcggggag acctgggata gcaagttcag caccatcgcc
780
tccagctacg aagagtgccg ggctgagagc gtgggtctct acctctgtct ccaccgcaa
840
gtgctggaga tctttggctt tgagggggct gatgcggagg acgtgatcta cgtgaactgg
900
ctcaacatgg ttggggccgg gctgctcgct ctggagttct acacacctga ggccttcaac
960
tggcgacagg cccatattga ggcccggttt gtgatcctga gagtcttget ggaggctggc
1020
gagggactcg ttaccatcac tcccaccaca ggctccgatg ggcgcccaga tgcccgggtc
1080
cgcctcgacc gcagcaagat ccggtctgtg ggcaagcctg ctctagagcg ctctctgcgg
1140
agacttcagg tgctgaagtc cacaggggat gtggccggag ggcggggccct gtacgagggg
1200
tatgcaacgg tcaactgatgc gcccccgag tgcttctctca ccctcaggga cacggtgctg
1260
ctgcgtaagg aatctcggaa gctcattgtt cagcccaaca ctgccttga aggtaatggc
1320
tcagacgtgc agcttctgga atacgaggcg tcagctgctg gcctcatccg atccttctct
1380
gagcggtttcc cagaggatgg acccgagttg gaggagatcc tcacacagct ggccacagcc
1440
gatgcccgat tctggaaggg cccagtgag gcccacatctg gccaaagcttg aggaagatgt
1500
gtggccttgc cccattcca tcagaccaag gctgcaagtg gccctccacg tgtgtgtatt
1560
taggggtggg gagggggagg ggcaggagct tggaccttgg tactacctca gctgagggtg
1620
gtgnacacaa ccccttccat ttgtcagcac tttccagcct gccaatgtct tcccctctgt
1680
gatcatttca tctgcactgc catacgtgga gtgagcaaga cagggttac catcctgtct
1740
accagatgag gaaatggcag ttctgagaag tcaactggtct agatcccgcg ggtggcacgt
1800
gacagctagg gttcaaaacg ttctcaccaa atccaatgct cctcacatat taattttata
1860
accagacaaa taaatattag agacaaccac catcaaaaaa aaa
1903

<210> 3596

<211> 496

<212> PRT

<213> Homo sapiens

<400> 3596

Phe Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln Lys Val Val

1		5		10		15									
Glu	Gln	Leu	Glu	Lys	Ala	Lys	Ala	Tyr	Ala	Ala	Asn	Ser	His	Gln	Gly
		20						25					30		
Gln	Met	Leu	Ala	Gln	Tyr	Ile	Glu	Ser	Phe	Thr	Gln	Gly	Ser	Ile	Glu
		35						40					45		
Ala	His	Lys	Arg	Gly	Ser	Arg	Phe	Trp	Ile	Gln	Asp	Lys	Gly	Pro	Ile
		50						55					60		
Val	Glu	Ser	Tyr	Ile	Gly	Phe	Ile	Glu	Ser	Tyr	Arg	Asp	Pro	Phe	Gly
65					70					75					80
Ser	Arg	Gly	Glu	Phe	Glu	Gly	Phe	Val	Ala	Val	Val	Asn	Lys	Ala	Met
					85					90					95
Ser	Ala	Lys	Phe	Glu	Arg	Leu	Val	Ala	Ser	Ala	Glu	Gln	Leu	Leu	Lys
					100					105					110
Glu	Leu	Pro	Trp	Pro	Pro	Thr	Phe	Glu	Lys	Asp	Lys	Phe	Leu	Thr	Pro
					115					120					125
Asp	Phe	Thr	Ser	Leu	Asp	Val	Leu	Thr	Phe	Ala	Gly	Ser	Gly	Ile	Pro
Ala	Gly	Ile	Asn	Ile	Pro	Asn	Tyr	Asp	Asp	Leu	Arg	Gln	Thr	Glu	Gly
145					150					155					160
Phe	Lys	Asn	Val	Ser	Leu	Gly	Asn	Val	Leu	Ala	Val	Ala	Tyr	Ala	Thr
					165					170					175
Gln	Arg	Glu	Lys	Leu	Thr	Phe	Leu	Glu	Glu	Asp	Asp	Lys	Asp	Leu	Tyr
					180					185					190
Ile	Leu	Trp	Lys	Gly	Pro	Ser	Phe	Asp	Val	Gln	Val	Gly	Leu	His	Glu
					195					200					205
Leu	Leu	Gly	His	Gly	Ser	Gly	Lys	Leu	Phe	Val	Gln	Asp	Glu	Lys	Gly
Ala	Phe	Asn	Phe	Asp	Gln	Glu	Thr	Val	Ile	Asn	Pro	Glu	Thr	Gly	Glu
225					230					235					240
Gln	Ile	Gln	Ser	Trp	Tyr	Arg	Ser	Gly	Glu	Thr	Trp	Asp	Ser	Lys	Phe
					245					250					255
Ser	Thr	Ile	Ala	Ser	Ser	Tyr	Glu	Glu	Cys	Arg	Ala	Glu	Ser	Val	Gly
					260					265					270
Leu	Tyr	Leu	Cys	Leu	His	Pro	Gln	Val	Leu	Glu	Ile	Phe	Gly	Phe	Glu
					275					280					285
Gly	Ala	Asp	Ala	Glu	Asp	Val	Ile	Tyr	Val	Asn	Trp	Leu	Asn	Met	Val
Arg	Ala	Gly	Leu	Leu	Ala	Leu	Glu	Phe	Tyr	Thr	Pro	Glu	Ala	Phe	Asn
305					310					315					320
Trp	Arg	Gln	Ala	His	Met	Gln	Ala	Arg	Phe	Val	Ile	Leu	Arg	Val	Leu
					325					330					335
Leu	Glu	Ala	Gly	Glu	Gly	Leu	Val	Thr	Ile	Thr	Pro	Thr	Thr	Gly	Ser
					340					345					350
Asp	Gly	Arg	Pro	Asp	Ala	Arg	Val	Arg	Leu	Asp	Arg	Ser	Lys	Ile	Arg
					355					360					365
Ser	Val	Gly	Lys	Pro	Ala	Leu	Glu	Arg	Phe	Leu	Arg	Arg	Leu	Gln	Val
					370					375					380
Leu	Lys	Ser	Thr	Gly	Asp	Val	Ala	Gly	Gly	Arg	Ala	Leu	Tyr	Glu	Gly
385					390					395					400
Tyr	Ala	Thr	Val	Thr	Asp	Ala	Pro	Pro	Glu	Cys	Phe	Leu	Thr	Leu	Arg
					405					410					415
Asp	Thr	Val	Leu	Leu	Arg	Lys	Glu	Ser	Arg	Lys	Leu	Ile	Val	Gln	Pro
					420					425				430	
Asn	Thr	Arg	Leu	Glu	Gly	Asn	Gly	Ser	Asp	Val	Gln	Leu	Leu	Glu	Tyr

	435		440		445										
Glu	Ala	Ser	Ala	Ala	Gly	Leu	Ile	Arg	Ser	Phe	Ser	Glu	Arg	Phe	Pro
	450				455				460						
Glu	Asp	Gly	Pro	Glu	Leu	Glu	Glu	Ile	Leu	Thr	Gln	Leu	Ala	Thr	Ala
465				470				475					480		
Asp	Ala	Arg	Phe	Trp	Lys	Gly	Pro	Ser	Glu	Ala	Pro	Ser	Gly	Gln	Ala
			485					490					495		

<210> 3597

<211> 1090

<212> DNA

<213> Homo sapiens

<400> 3597

```

nccatggaag ggctggagga ggcagaggcc aactgctccg tggcgttcgc tgaggctcag
60
agatgggttg aggcagtaac agagaagaat tttgaaacaa aagattttcg agcctctcta
120
gaaaatggtg ttctgctgtg tgatttgatt aataagctta aacctggcgt cattaagaag
180
atcaatagac tgtctacacc aatagcagga ttggataata taaacgtttt cttgaaagct
240
tgtgaacaga ttggattgaa agaagcccag cttttccatc ctggagatct acaggattta
300
tcaaatcgag tcaactgtcaa gcaagaagag actgacagga gaggtaaaaa tgttttgata
360
acattgtact ggctgggaag aaaagcacaa agcaaccctg actataatgg tccccatctt
420
aatttgaaag cgtttgagaa tcttttagga caagcactga cgaaggcact cgaagactcc
480
agcttcctga aaagaagtgg cagggacagt ggctacggtg acatctggtg tcctgaacgt
540
ggagaatttc ttgctcctcc aaggcaccat aagagagaag attcctttga aagcttggac
600
tctttgggct cgaggtcatt gacaagctgc tcctctgata tcacgttgag aggggggctg
660
gaagggtttg aaagtgcac agattcggaa ttacattca agatgcagga ttataataaa
720
gatgatatgt cgtatcgaag gatttcggct gttgagccaa agactgcgtt acccttcaat
780
cgttttttac ccaacaaaag tagacagcca tcctatgtac cagcacctct gagaaagaaa
840
aagccagaca aacatgagga taacagaaga agttgggcaa gcccggttta tacagaagca
900
gatggaacat tttcaaggag taagtccatg agtgatgtca gcgcagaaga tgttcaaaac
960
ttgcgtcagc tgcgttacga ggagatgcag aaaataaaat caaattaaa agaacaagat
1020
cagaaatggc aggatgacct tgcaaatgg aaagatcgtc gaaaaagtta cacttcagat
1080
ctgcagaaga
1090

```

<210> 3598

<211> 159
 <212> PRT
 <213> Homo sapiens

<400> 3598
 Arg Ser Leu Thr Ser Cys Ser Ser Asp Ile Thr Leu Arg Gly Gly Arg
 1 5 10 15
 Glu Gly Phe Glu Ser Asp Thr Asp Ser Glu Phe Thr Phe Lys Met Gln
 20 25 30
 Asp Tyr Asn Lys Asp Asp Met Ser Tyr Arg Arg Ile Ser Ala Val Glu
 35 40 45
 Pro Lys Thr Ala Leu Pro Phe Asn Arg Phe Leu Pro Asn Lys Ser Arg
 50 55 60
 Gln Pro Ser Tyr Val Pro Ala Pro Leu Arg Lys Lys Lys Pro Asp Lys
 65 70 75 80
 His Glu Asp Asn Arg Arg Ser Trp Ala Ser Pro Val Tyr Thr Glu Ala
 85 90 95
 Asp Gly Thr Phe Ser Arg Ser Lys Ser Met Ser Asp Val Ser Ala Glu
 100 105 110
 Asp Val Gln Asn Leu Arg Gln Leu Arg Tyr Glu Glu Met Gln Lys Ile
 115 120 125
 Lys Ser Gln Leu Lys Glu Gln Asp Gln Lys Trp Gln Asp Asp Leu Ala
 130 135 140
 Lys Trp Lys Asp Arg Arg Lys Ser Tyr Thr Ser Asp Leu Gln Lys
 145 150 155

<210> 3599
 <211> 691
 <212> DNA
 <213> Homo sapiens

<400> 3599
 gtgcacatcc tcatgggctc ctgttacaag accaaaaaat tcctgctctc cctggcagaa
 60
 aacaagctgg gtccctgcat gctcctggca ctgaggggga accagaccat ggtggaggta
 120
 aggagctggt cggggctcct ggtgggggtg ctggtctccc gtcccttgct cgtgccgata
 180
 gagcatctgc tgggagccaa gaactgctgc aggcacgggg ggcagtgggt gaggcgtgca
 240
 gtcccagccg tcctgagctt agtgggagcc tcgagccttc atcatgcagt gtatttgttt
 300
 ctgttgatgat ccagctgata cattgatcag tgggggtggg gacgcttctg ttctgctcat
 360
 ttattgctgt gtaacaaacc acctctaagt gagggcttta aaacaagatc gttcatttct
 420
 tttgcacatg ggcattgggg tacctgggag cagctacgca cttctcacct ggggcctcat
 480
 cagtcagatg gggccagggt ggggttagccc caaggcttct cgcattggcc taagaggcct
 540
 cagacaatga gggctttggc ggctggggct cccagcgac acccttcacc tcgtggcctc
 600
 caggtagcct gtccacctgc caagaacaca cacaccagc cccacaggtc acccctcacc
 660

tgctgctgct cctctctctc cctgcacgcg t
691

<210> 3600

<211> 98

<212> PRT

<213> Homo sapiens

<400> 3600

Met	Gly	Ser	Cys	Tyr	Lys	Thr	Lys	Lys	Phe	Leu	Leu	Ser	Leu	Ala	Glu
1				5					10					15	
Asn	Lys	Leu	Gly	Pro	Cys	Met	Leu	Leu	Ala	Leu	Arg	Gly	Asn	Gln	Thr
		20						25					30		
Met	Val	Glu	Val	Arg	Ser	Trp	Ser	Gly	Ser	Leu	Val	Gly	Trp	Leu	Ala
	35					40					45				
Pro	Arg	Pro	Leu	Ser	Val	Pro	Ile	Glu	His	Leu	Leu	Gly	Ala	Lys	Asn
	50				55					60					
Cys	Cys	Arg	His	Gly	Gly	Gln	Trp	Val	Arg	Arg	Ala	Val	Pro	Ala	Val
65				70					75					80	
Leu	Ser	Leu	Val	Gly	Ala	Ser	Ser	Leu	His	His	Ala	Val	Tyr	Leu	Phe
			85					90						95	
Leu	Leu														

<210> 3601

<211> 2963

<212> DNA

<213> Homo sapiens

<400> 3601

cgatcctccc acctcagcct cccaaagggc tgagattaca ggtgtgagcc cccgaatccg
60
gtgtgcactg ctgtttactt agtatttttc ttttaactaga tttattttta aacaaggctt
120
tgtccaagga catttggtct gcaggcacag agctgattaa ctggttatgt atcttttgat
180
aataaggcag cgatcattaa gaaaaacgtg tagccaatga aataacatgt tctgggcccc
240
accactggac tgggaggtgc agcgcacca agcagaggct gcctcctgcc ctccacgcct
300
gctgctctcg caggcagggg ctctgctgct tacagcagtg cggccatctc ggcttctctc
360
cacatgctct gtcacgcgct ggtccccacc atacctctcg ccaccccgctg cctctgtccc
420
cgtgcggcct gaggagctcc agctttccct gccagcgggtg ctctgggagt ggggacgtga
480
tgcagggcga gcatgatgca acggggcacc ccagaccctt ccctcccgtg gggggagggg
540
tgtggcacgc agaggggcag agggcgggga cactggcccc gtgggggaag aagggtgctg
600
cacagccgtt actgtccccc gtgggacccc agcctggagc ccccatcct ttggtcctg
660
cctgtggcca ctacgtctc aggtggccac atgcacatcc cctgtcctt ccctgcgcac
720

ctgccctgcc cagtggcctt tctgggtccca gctactgaaa ccggtgagct gctccagggt
780
gaggctgctt tctggctcct ggtgtatttg gacacagata ggcccttagt gtccagaggc
840
gccccatgca gccctcatgg tcagcaggac acccaggata gacccccctcc acgcagcacc
900
tgggcccctgg gagcggctgc ttttaggatg ccacctgttc ctgggcgcct tgttttttagc
960
ttctgacctg aagatgagcg ggggagcgcg gtggcgaggg cacgtgggcg tggctcacgg
1020
tctcctctct gtggcaggta catgtcccag agcaagcaca cggaggcccg ggagctcatg
1080
tactcgggag ccctgctctt cttcagccat ggccagcaaa acagtgcagc agacttgtcc
1140
atgctggctc tggagtccct ggagaaggcg gaagtggagg tggctgacga gctgctggaa
1200
aatctggcta aagtgttcag cctgatggac cccaactctc ctgagcgcgt gacctttgtg
1260
tccagagccc tgaagtggtc cagtgggggc tccgggaagc tgggccaccc ccggctgcac
1320
cagctgctgg ccctcaccct gtggaaagaa caaaactatt gtgagtcgag gtatcatttt
1380
ctgcactcag cggacgggga gggctgtgcc aacatgctgg tggagtattc cacgtcccgc
1440
ggcttccgca gcgagggtga catgttcgtg gcccaggecg tgctacagtt tctctgttta
1500
aaaaacaaaa gtagcgcctc ggtggtcttc acgacgtaca cccagaagca cccgtccatc
1560
gaggacgggc ctccgtttgt ggagccgctg cttaacttca tctggttcct gctgctggct
1620
gtggacggtg ggaagctgac ggtgttcact gtgctgtgtg agcagtagca gccatccctc
1680
cggcgggacc ccatgtacaa cgagtacctc gaccgcatag gacagctgtt cttcggcgtc
1740
ccgcccagc agacgtcttc ctacgggggc ctgctcggga accttctgac cagcctcatg
1800
ggctcctcag agcaggagga tggggaggag agccccagcg acggcagccc catcgagctg
1860
gactgaactg gccaggccac gtggagacac cacggctgac gacggctgga gggacgtttc
1920
agaggcgagt cctgggtggc tctcgcctt gggggctcct ggccctgagg ctggcggtgg
1980
ccgcatgccg gcgcgtgtct gtttctgtgc ggcggctcag ggtggcgcgg ctgctgtca
2040
ctgtgctgct gggacccaag agtggggcgt cgccctgct ggccgcgcg tccccgaga
2100
ttgaccaca ataaagcaca ggccttaccg cggcgtcacc ctctcccact cctttgttct
2160
gggtcctttc gggagggctg atgggcagca caggaggccc gtcctcgggg ggctgcgcac
2220
atcacgtccc ttgccggcg tccggcacag ctgcggtcac caaagcaggt gctggccctc
2280
ggacctgaga gccagccag ggcccatgtg gtctgcaaat gggagcggct gtttttgaa
2340

acgggggtcat tctgcagtca ggacgaaccg gtccccgtcg cagacggagt gcacgtgccc
 2400
 tgcgccacat cctcacgctc ggtggagggga cgcgtgcggc gggacgggtgc ctacgggtac
 2460
 ttgcagctgt gtcccatgtg gcatcccaga gctgcgcctt gctggtctct gtgagcgcca
 2520
 cgctgctgtg ctggaaatgc cgctttaaaa agggataccg tgggactctg cccgtctctt
 2580
 tcataacgca atatttattt gtattgggtg acgattgatt ctttcgacct aacattttgg
 2640
 gttttaacca aataaccggt ccaggagtga gcagctccgt tctgtcagat gctactccaa
 2700
 atgttaccag aacgatgaca aaaggggaga cgctctattt tttcacagtt aaatgacagt
 2760
 tgtagattga tacgcagttg tgcattggaa ggggaaacgc acagctttat ttactgtaaa
 2820
 gtggaatttc aggaaggctt gtgtgaaccg ttgcgcataa ataaaccctt tctaccgggc
 2880
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2940
 aaaaaaaaaa aaaaaaaaaa aaa
 2963

<210> 3602

<211> 299

<212> PRT

<213> Homo sapiens

<400> 3602

Pro	Glu	Asp	Glu	Arg	Gly	Ser	Ala	Val	Ala	Arg	Ala	Arg	Gly	Arg	Gly
1			5					10					15		
Ser	Arg	Ser	Pro	Leu	Cys	Gly	Arg	Tyr	Met	Ser	Gln	Ser	Lys	His	Thr
			20					25					30		
Glu	Ala	Arg	Glu	Leu	Met	Tyr	Ser	Gly	Ala	Leu	Leu	Phe	Phe	Ser	His
			35					40					45		
Gly	Gln	Gln	Asn	Ser	Ala	Ala	Asp	Leu	Ser	Met	Leu	Val	Leu	Glu	Ser
			50					55				60			
Leu	Glu	Lys	Ala	Glu	Val	Glu	Val	Ala	Asp	Glu	Leu	Leu	Glu	Asn	Leu
65															
Ala	Lys	Val	Phe	Ser	Leu	Met	Asp	Pro	Asn	Ser	Pro	Glu	Arg	Val	Thr
Phe	Val	Ser	Arg	Ala	Leu	Lys	Trp	Ser	Ser	Gly	Gly	Ser	Gly	Lys	Leu
Gly	His	Pro	Arg	Leu	His	Gln	Leu	Leu	Ala	Leu	Thr	Leu	Trp	Lys	Glu
Gln	Asn	Tyr	Cys	Glu	Ser	Arg	Tyr	His	Phe	Leu	His	Ser	Ala	Asp	Gly
Glu	Gly	Cys	Ala	Asn	Met	Leu	Val	Glu	Tyr	Ser	Thr	Ser	Arg	Gly	Phe
145															
Arg	Ser	Glu	Val	Asp	Met	Phe	Val	Ala	Gln	Ala	Val	Leu	Gln	Phe	Leu
Cys	Leu	Lys	Asn	Lys	Ser	Ser	Ala	Ser	Val	Val	Phe	Thr	Thr	Tyr	Thr
Gln	Lys	His	Pro	Ser	Ile	Glu	Asp	Gly	Pro	Pro	Phe	Val	Glu	Pro	Leu

195	200	205
Leu Asn Phe Ile Trp Phe Leu Leu Leu Ala Val Asp Gly Gly Lys Leu		
210	215	220
Thr Val Phe Thr Val Leu Cys Glu Gln Tyr Gln Pro Ser Leu Arg Arg		
225	230	235
Asp Pro Met Tyr Asn Glu Tyr Leu Asp Arg Ile Gly Gln Leu Phe Phe		240
	245	250
Gly Val Pro Pro Lys Gln Thr Ser Ser Tyr Gly Gly Leu Leu Gly Asn		255
	260	265
Leu Leu Thr Ser Leu Met Gly Ser Ser Glu Gln Glu Asp Gly Glu Glu		270
	275	280
Ser Pro Ser Asp Gly Ser Pro Ile Glu Leu Asp		285
290	295	

<210> 3603

<211> 1082

<212> DNA

<213> Homo sapiens

<400> 3603

```

nnagctcctg cggaaccgat ctcaagcaca aggacaagca ggaaaacggc gagaggactg
60
gaggggtgcc tctgatcaaa gcccacaaga gagaaacacc agatgaaaat ggtaaaaacc
120
agagagccga tgatttttaa atgtgtgttt gtgggtgaaa tggctgcgca ggtcggagcg
180
gtgcgcgtag tacgggcggt ggcggcgag gagagccgg acaaagaggg gaaggagaaa
240
cctcatgctg gggctctccc gcggggagtt aaacggcagc gccgatctag cagtgggggg
300
tctcaggaga agcgggggcg gccgagccag gagccccctc tcgctcccc tcaccggcgg
360
cgtcgcagcc gccaacatcc tgggcccgtg ccgccaacga atgcagcccc aactgtccca
420
ggccctgttg agcctcttct cctgcccgtt ccgcccacc cttegttggc acccgccggg
480
cccgtgtgct ctgcccctct cccggcccca agcaccggc cctcttcacc ttctgcctc
540
tgacggtgag cgcggccggg cccaagcata agggccacaa ggagcggcac aagcaccatc
600
accaccggc ccccgatggt gatcccagct cctgcggaac cgatctcaag cacaaggaca
660
agcaggaaaa cggcgagagg actggagggg tgcctctgat caaagcccc aagagagaaa
720
caccagatga aaatggtaaa acccagagag ccgatgattt tgtcttgaag aaaataaaga
780
agaaaaagaa aaagaaacac cgagaagaca tgcgaggaag acgccttaaa atgtacaata
840
aggaagtaca aaccgtctgt gctggcctga cccgcatcag taaagaaatt ctcacccaag
900
gacaaataaa tagcacttca ggacttaata aggagtcctt caggatatctg aaagatgaac
960
agctgtgccc attaaatttg ggtatgcaag aatatcgggt accccagga gtacaaacac
1020

```

cttttatgac tcaccaggaa cattctattc gtagaaattt cttaaaaaaca ggtactaaat
 1080
 tt
 1082

<210> 3604
 <211> 146
 <212> PRT
 <213> Homo sapiens

<400> 3604
 Met Lys Met Val Lys Pro Arg Glu Pro Met Ile Phe Lys Cys Val Phe
 1 5 10 15
 Val Gly Glu Met Ala Ala Gln Val Gly Ala Val Arg Val Val Arg Ala
 20 25 30
 Val Ala Ala Gln Glu Glu Pro Asp Lys Glu Gly Lys Glu Lys Pro His
 35 40 45
 Ala Gly Val Ser Pro Arg Gly Val Lys Arg Gln Arg Arg Ser Ser Ser
 50 55 60
 Gly Gly Ser Gln Glu Lys Arg Gly Arg Pro Ser Gln Glu Pro Pro Leu
 65 70 75 80
 Ala Pro Pro His Arg Arg Arg Ser Arg Gln His Pro Gly Pro Leu
 85 90 95
 Pro Pro Thr Asn Ala Ala Pro Thr Val Pro Gly Pro Val Glu Pro Leu
 100 105 110
 Leu Leu Pro Pro Pro Pro Pro Pro Ser Leu Ala Pro Ala Gly Pro Ala
 115 120 125
 Val Ala Ala Pro Leu Pro Ala Pro Ser Thr Arg Pro Ser Ser Pro Ser
 130 135 140
 Arg Leu
 145

<210> 3605
 <211> 2004
 <212> DNA
 <213> Homo sapiens

<400> 3605
 nggcggcggc gatggccgag caggagggcg cccgcaacgg cggcccaacc gcggggcgtc
 60
 cagcgtgtgg agggcaagct gcgcgccagc gtcgagaagg gcgactacta cgaggcgcac
 120
 cagatgtacc ggaccctgtt cttcaggtac atgtcccaga gcaagcacac ggaggcccgg
 180
 gagtcatgt actcgggagc cctgctcttc ttcagccatg gccagcaaaa cagtgcagca
 240
 gacttgcca tgctggctct ggagtccttg gagaaggcgg aagtggaggt ggctgacgag
 300
 ctgctggaaa atctggctaa agtggtcagc ctgatggacc ccaactctcc tgagcgcgtg
 360
 acctttgtgt ccagagccct gaagtggctc agtgggggct ccgggaagct gggccacccc
 420
 cggctgcacc agctgctggc cctcaccctg tggaaagaac aaaactattg tgagtcgagg
 480

tatcattttc tgcactcagc ggacggggag ggctgtgcca acatgctggt ggagtattcc
540
acgtcccgcg gcttccgcag cgaggtggac atgttcgtgg ctcaggccgt gctacagttt
600
ctctgtttta aaaacaaaag tagcgcatcg gtgggtcttca cgacgtacac ccagaagcac
660
ccgtccatcg aggacgggccc tccgtttgtg gagccgctgc ttaacttcat ctggttcctg
720
ctgctggctg tggacgggtg gaagctgacg gtgttcaactg tgctgtgtga gcagtaccag
780
ccatccctcc ggcgggaccc catgtacaac gagtacctcg accgcatagg acagctgttc
840
ttcggcgctc cgcccaagca gacgtcttcc tacggggggc tgctcgggaa cttctgacc
900
agcctcatgg gctcctcaga gcaggaggat ggggaggaga gccccagcga cggcagcccc
960
atcgagctgg actgaactgg ccaggccacg tggagacacc acggtcgacg acggctggag
1020
ggacgtttca gaggcgagtc ctgggtggct cctcgccttg ggggctcctg gccctgaggc
1080
tggcggtggc cgcattgccg cgcgtgtctg tttctgtgcg gcggctcagg gtggcgcggc
1140
tgctgctcac tgtgctgctg ggaccaaga gtggggcgct gccctgctg gccgcccgt
1200
cccccgagat tgaccacaaa taaagcacag gccttacgc ggcgtaccc tctcccactc
1260
ctttgttctg ggtcctttcg ggagggctga tgggcagcac aggaggcccg tcctcggggg
1320
gctgcgcaca tcacgtcct tgccgggcgt ccggcacagc tcgggtcacc aaagcaggtg
1380
ctggccctcg gacctgagag cccagccagg gccatgtgg tctgcaaatg ggagcggctg
1440
tttttgaaca cggggtcatt ctgcagtcag gacgaaccgg tccccgtcgc agacggagtg
1500
cacgtgccct gcgccacatc ctcacgctcg gtggaggagc gcgtgcggcg ggacgggtgc
1560
tacgggtact tgcagctgtg tcccatgtgg catcccagag ctgcgccctg ctggtctctg
1620
tgagcgccac gctgctgtgc tggaaatgcc gctttaaaaa gggataccgt gggactctgc
1680
cgtctcttt cataacgcaa tatttatttg tattgggtga cgattgattc tttcgacct
1740
acattttggg ttttaaccaa ataaccggtc caggagttag cagctccgtt ctgtcagatg
1800
ctactccaaa tgttaccaga acgatgacaa aaggggagac gctctatttt ttcacagtta
1860
aatgacagtt gtagattgat acgcagttgt gcatgggaag gggaaacgca cagctttatt
1920
tactgtaaag tggaaatttca ggaaggcttg tgtgaaccgt tgcgcataaa taaacccttt
1980
ctaccgggca aaaaaaaaaa aaaa
2004

<210> 3606

<211> 324

<212> PRT

<213> Homo sapiens

<400> 3606

```

Xaa Arg Arg Arg Trp Pro Ser Arg Arg Ala Pro Ala Thr Ala Ala Gln
 1           5           10           15
Pro Arg Gly Val Gln Arg Val Glu Gly Lys Leu Arg Ala Ser Val Glu
          20           25           30
Lys Gly Asp Tyr Tyr Glu Ala His Gln Met Tyr Arg Thr Leu Phe Phe
          35           40           45
Arg Tyr Met Ser Gln Ser Lys His Thr Glu Ala Arg Glu Leu Met Tyr
          50           55           60
Ser Gly Ala Leu Leu Phe Phe Ser His Gly Gln Gln Asn Ser Ala Ala
65           70           75           80
Asp Leu Ser Met Leu Val Leu Glu Ser Leu Glu Lys Ala Glu Val Glu
          85           90           95
Val Ala Asp Glu Leu Leu Glu Asn Leu Ala Lys Val Phe Ser Leu Met
          100          105          110
Asp Pro Asn Ser Pro Glu Arg Val Thr Phe Val Ser Arg Ala Leu Lys
          115          120          125
Trp Ser Ser Gly Gly Ser Gly Lys Leu Gly His Pro Arg Leu His Gln
          130          135          140
Leu Leu Ala Leu Thr Leu Trp Lys Glu Gln Asn Tyr Cys Glu Ser Arg
145          150          155          160
Tyr His Phe Leu His Ser Ala Asp Gly Glu Gly Cys Ala Asn Met Leu
          165          170          175
Val Glu Tyr Ser Thr Ser Arg Gly Phe Arg Ser Glu Val Asp Met Phe
          180          185          190
Val Ala Gln Ala Val Leu Gln Phe Leu Cys Leu Lys Asn Lys Ser Ser
          195          200          205
Ala Ser Val Val Phe Thr Thr Tyr Thr Gln Lys His Pro Ser Ile Glu
          210          215          220
Asp Gly Pro Pro Phe Val Glu Pro Leu Leu Asn Phe Ile Trp Phe Leu
225          230          235          240
Leu Leu Ala Val Asp Gly Gly Lys Leu Thr Val Phe Thr Val Leu Cys
          245          250          255
Glu Gln Tyr Gln Pro Ser Leu Arg Arg Asp Pro Met Tyr Asn Glu Tyr
          260          265          270
Leu Asp Arg Ile Gly Gln Leu Phe Phe Gly Val Pro Pro Lys Gln Thr
          275          280          285
Ser Ser Tyr Gly Gly Leu Leu Gly Asn Leu Leu Thr Ser Leu Met Gly
          290          295          300
Ser Ser Glu Gln Glu Asp Gly Glu Glu Ser Pro Ser Asp Gly Ser Pro
305          310          315          320
Ile Glu Leu Asp

```

<210> 3607

<211> 1726

<212> DNA

<213> Homo sapiens

<400> 3607

nacgcgtcgt gggagtgtgt ggaccccaca ccggacttgc aggcactgtt tgttcagttt
60
aacgaccaat tcttctgggg ccagctggag gccgtcgagg tgaagtggag cgtgcgaatg
120
accctgtgtg ctgggatatg cagctatgaa gggaaggggtg gaatgtgttc catccgtctc
180
agcgaacccc ttttgaagtt gaggccaaga aaggatcttg tagagacct cctgcatgaa
240
atgatacatg cctatttatt tgtcactaat aacgacaaag accgagaagg gcatgggtcca
300
gaatthttgta aacatatgca tcgcatcaac agcctgactg gagccaatat aacgggtatac
360
catacttttc acgatgaggt ggatgagtat cggcgacact ggtggcgctg caatgggccg
420
tgccagcaca ggccaccgta ttacggctat gtcaaacgag ctactaacag ggaaccctct
480
gctcatgact attggtgggc tgagcaccag aaaacctgtg gaggcactta cataaaaatc
540
aaggaaccag agaattactc aaaaaaggc aaaggaaagg caaaactagg aaaggaacca
600
gtattggccg cagagaataa agataaaccc aacagaggtg aggccagct agtaatccct
660
tttagtggga aaggatatgt tctaggagaa acaagcaatt taccttcacc tgggaaactg
720
atcacttcac atgccattaa taaaacccaa gatcttttaa atcaaaacca ttcagcaaatt
780
gctgtaagac ctaattctaa aatcaaggtg aaatttgaac agaattggtc aagtaaaaat
840
tctcatctgg tctccctgc tgtagtaac agtcaccaa atgttctaag caactacttt
900
cctagagtat catttgcaa ccaaaaggct ttcagaggtg tgaatggatc tccaaggata
960
agtgtaacag ttggcaacat ccctaaaaac tcagtctctt ctagttctca gagaaggggt
1020
tcatcttcta agatatccct aagaaattct tcaaaagtaa cggaatcagc atctgtgatg
1080
ccatcccagg atgtgagtg gtctgaagat acattcccaa ataaacgacc taggctagaa
1140
gataagactg tttttgacaa tttttttatc aagaaagagc aaataaaaag cagtggtaatt
1200
gatccaaagt atagtacaac cacagctcag aattccagca gttcatccag tcagagcaaa
1260
atgggttaatt gccagtttg tcagaatgaa gttctgggag tctcagatta atgagcactt
1320
ggactgggtg cttgaaggtg acagcatcaa agtcaaaagc gaagaaagtc tttgaaaaag
1380
gtttcaaagt ctcaagtacc acctgtatta tctcactaat gtgctatgtc agccagtcag
1440
gaagttcttg ttaatactaa gatttgtagg ttataatcta gttcacataa ccaatagaaa
1500
gtgtcctatt ttatatatac gcatataaga ttgtaatttt aagatgtttt gtgtctcagg
1560
gtgctacatt cactcttgcc ttaggtatac tgtaaccag gttctgcctg tcgtgtataa
1620

tttttagata cttttgttct ttcttgctct taaggatttt aaaaacctgt taatcttttt
 1680
 atttgatac tttcctaaaa atattcatat ggggaatcct gtcaaa
 1726

<210> 3608

<211> 436

<212> PRT

<213> Homo sapiens

<400> 3608

Xaa	Ala	Ser	Trp	Glu	Leu	Val	Asp	Pro	Thr	Pro	Asp	Leu	Gln	Ala	Leu
1				5					10					15	
Phe	Val	Gln	Phe	Asn	Asp	Gln	Phe	Phe	Trp	Gly	Gln	Leu	Glu	Ala	Val
		20						25				30			
Glu	Val	Lys	Trp	Ser	Val	Arg	Met	Thr	Leu	Cys	Ala	Gly	Ile	Cys	Ser
		35					40					45			
Tyr	Glu	Gly	Lys	Gly	Gly	Met	Cys	Ser	Ile	Arg	Leu	Ser	Glu	Pro	Leu
	50					55				60					
Leu	Lys	Leu	Arg	Pro	Arg	Lys	Asp	Leu	Val	Glu	Thr	Leu	Leu	His	Glu
65					70					75				80	
Met	Ile	His	Ala	Tyr	Leu	Phe	Val	Thr	Asn	Asn	Asp	Lys	Asp	Arg	Glu
				85					90					95	
Gly	His	Gly	Pro	Glu	Phe	Cys	Lys	His	Met	His	Arg	Ile	Asn	Ser	Leu
			100					105					110		
Thr	Gly	Ala	Asn	Ile	Thr	Val	Tyr	His	Thr	Phe	His	Asp	Glu	Val	Asp
		115					120					125			
Glu	Tyr	Arg	Arg	His	Trp	Trp	Arg	Cys	Asn	Gly	Pro	Cys	Gln	His	Arg
	130					135					140				
Pro	Pro	Tyr	Tyr	Gly	Tyr	Val	Lys	Arg	Ala	Thr	Asn	Arg	Glu	Pro	Ser
145					150					155				160	
Ala	His	Asp	Tyr	Trp	Trp	Ala	Glu	His	Gln	Lys	Thr	Cys	Gly	Gly	Thr
			165						170					175	
Tyr	Ile	Lys	Ile	Lys	Glu	Pro	Glu	Asn	Tyr	Ser	Lys	Lys	Gly	Lys	Gly
		180						185					190		
Lys	Ala	Lys	Leu	Gly	Lys	Glu	Pro	Val	Leu	Ala	Ala	Glu	Asn	Lys	Asp
	195						200					205			
Lys	Pro	Asn	Arg	Gly	Glu	Ala	Gln	Leu	Val	Ile	Pro	Phe	Ser	Gly	Lys
	210					215					220				
Gly	Tyr	Val	Leu	Gly	Glu	Thr	Ser	Asn	Leu	Pro	Ser	Pro	Gly	Lys	Leu
225				230						235				240	
Ile	Thr	Ser	His	Ala	Ile	Asn	Lys	Thr	Gln	Asp	Leu	Leu	Asn	Gln	Asn
			245						250					255	
His	Ser	Ala	Asn	Ala	Val	Arg	Pro	Asn	Ser	Lys	Ile	Lys	Val	Lys	Phe
		260						265					270		
Glu	Gln	Asn	Gly	Ser	Ser	Lys	Asn	Ser	His	Leu	Val	Ser	Pro	Ala	Val
	275						280					285			
Ser	Asn	Ser	His	Gln	Asn	Val	Leu	Ser	Asn	Tyr	Phe	Pro	Arg	Val	Ser
	290					295					300				
Phe	Ala	Asn	Gln	Lys	Ala	Phe	Arg	Gly	Val	Asn	Gly	Ser	Pro	Arg	Ile
305				310						315				320	
Ser	Val	Thr	Val	Gly	Asn	Ile	Pro	Lys	Asn	Ser	Val	Ser	Ser	Ser	Ser
			325						330					335	
Gln	Arg	Arg	Val	Ser	Ser	Ser	Lys	Ile	Ser	Leu	Arg	Asn	Ser	Ser	Lys

[illegible]

<210> 3609

<211> 1286

<212> DNA

<213> Homo sapiens

<400> 3609

ntcttgcaact	taagttgccc	ttgaagatgg	ttntgccttg	ggcctggaac	cccgagggag
60	ttcagcttca	ccaaatcatc	ccaagctttc	cgtagcactga	gagacatgct
120	tgcgtcaacc	agtgggagca	gctgaggggg	ccgggtggca	acgagggatgg
180	ctggacttgg	aagctgatgc	tgagcccca	gacctcgaga	gtacgaacct
240	gaagctccca	gggactat	ttt	gcctatattg	tggatttgg
300	gcagacaagt	tctgcagct	gntttggaac	caaaggtg	tgc
360	caannctacc	ccttgtcgcc	caccgccttc	accattgtg	agcaggtgct
420	gccttgacc	gaggcaccta	ctactgggag	gtggagatta	tgcagggctg
480	ggggtcatgg	ccgcagactt	ctccccaca	gagccctacg	accgcggcgc
540	aacgcccact	cctgctgctt	gcagtgggaat	ggacgcagct	tctcctctg
600	ctggaggctc	ccctgcccc	ccccttctcg	cccacggttg	gggtctgctt
660	gaccgtgcct	tggccttcta	tgctgtacgg	gacggcaaga	tgagcctcct
720	aaggcctccc	ggccccgcgc	gggtggcatc	ccggcctccc	ccattgacct
780	cgcttgaca	gtcactttgc	ggggctcttc	accacagac	tcaagcctgc
840	gagagtgtgg	acgcccactt	gcagatcggg	ccctcaaga	agtcctgcat
900	aagaggaggt	gatgccgggc	acgggcgctc	ctgctgccgt	ctctgctcca
960	tcctctgggc	cctctccttc	gtctgggaag	gcaccagcat	gagtcaccaca
1020					

tctcatttct agaggcttcc acctttttat acactcagcc ttccctctcc caggcaggag
 1080
 gacccccaga cctgttcccc ctgcagacct cacttctggg agacagagct acagctggga
 1140
 cagctccaag ctaccctaac ccttcctttc ccagggttct agaatagtgt ctggcatgta
 1200
 gtagatgctc aataaacact tgtcgagggg cccgatctgc aagtggggtc cgtcgaccgg
 1260
 ccgctaattt agtagtagta gtaggc
 1286

<210> 3610

<211> 268

<212> PRT

<213> Homo sapiens

<400> 3610

Met	Leu	Ala	Val	Ala	Cys	Val	Asn	Gln	Trp	Glu	Gln	Leu	Arg	Gly	Pro
1				5					10					15	
Gly	Gly	Asn	Glu	Asp	Gly	Pro	Gln	Lys	Leu	Asp	Leu	Glu	Ala	Asp	Ala
		20						25					30		
Glu	Pro	Gln	Asp	Leu	Glu	Ser	Thr	Asn	Leu	Leu	Glu	Ser	Glu	Ala	Pro
		35					40					45			
Arg	Asp	Tyr	Phe	Leu	Lys	Phe	Ala	Tyr	Ile	Val	Asp	Leu	Asp	Ser	Asp
	50					55					60				
Thr	Ala	Asp	Lys	Phe	Leu	Gln	Leu	Xaa	Trp	Asn	Gln	Arg	Cys	Gln	Glu
65					70					75					80
Gly	Ala	Val	Ser	Tyr	Gln	Xaa	Tyr	Pro	Leu	Ser	Pro	Thr	Arg	Phe	Thr
			85						90					95	
His	Cys	Glu	Gln	Val	Leu	Gly	Glu	Gly	Ala	Leu	Asp	Arg	Gly	Thr	Tyr
			100					105					110		
Tyr	Trp	Glu	Val	Glu	Ile	Ile	Glu	Gly	Trp	Val	Ser	Met	Gly	Val	Met
		115					120					125			
Ala	Ala	Asp	Phe	Ser	Pro	Gln	Glu	Pro	Tyr	Asp	Arg	Gly	Arg	Leu	Gly
		130				135					140				
Arg	Asn	Ala	His	Ser	Cys	Cys	Leu	Gln	Trp	Asn	Gly	Arg	Ser	Phe	Ser
145					150					155					160
Val	Trp	Phe	His	Gly	Leu	Glu	Ala	Pro	Leu	Pro	His	Pro	Phe	Ser	Pro
			165						170					175	
Thr	Val	Gly	Val	Cys	Leu	Glu	Tyr	Ala	Asp	Arg	Ala	Leu	Ala	Phe	Tyr
		180						185					190		
Ala	Val	Arg	Asp	Gly	Lys	Met	Ser	Leu	Leu	Arg	Arg	Leu	Lys	Ala	Ser
		195					200					205			
Arg	Pro	Arg	Arg	Gly	Gly	Ile	Pro	Ala	Ser	Pro	Ile	Asp	Pro	Phe	Gln
		210				215						220			
Ser	Arg	Leu	Asp	Ser	His	Phe	Ala	Gly	Leu	Phe	Thr	His	Arg	Leu	Lys
225					230					235					240
Pro	Ala	Phe	Phe	Leu	Glu	Ser	Val	Asp	Ala	His	Leu	Gln	Ile	Gly	Pro
			245						250					255	
Leu	Lys	Lys	Ser	Cys	Ile	Ser	Val	Leu	Lys	Arg	Arg				
			260					265							

<210> 3611

<211> 816

<212> DNA

<213> Homo sapiens

<400> 3611

tacggggttc actattatgc agtgaaggac aagcagggca taccatgggtg gctggggcctg
 60
 agctacaaaag ggatcttcca gtatgactac catgataaag tgaagccaag aaagatatctc
 120
 caatggagac agttggaaaa cctgtacttc agagaaaaga agttttccgt ggaagttcat
 180
 gaccacgca gggcttcagt gacaaggagg acgtttgggc acagcggcat tgcagtgcac
 240
 acgtggtatg catgtccggc attgatcaag tccatctggg ctatggccat aagccaacac
 300
 cagttctatc tggacagaaa gcagagtaag tccaaaatcc atgcagcacg cagcctgagt
 360
 gagatcgcca tcgacctgac cgagacgggg acgctgaaga cctcgaagct ggccaacatg
 420
 ggtagcaagg ggaagatcat cagcggcagc agcggcagcc tgctgtcttc aggttctcag
 480
 gaatcagata gctcgcagtc ggccaagaag gacatgctgg ctgccttgaa gtccaggcag
 540
 gaagctctgg aggaaaccct gcgtcagagg ctggaggaac tgaagaagct gtgtctccga
 600
 gaagctgagc tcacgggcaa gctgccagta gaatatcccc tggatccagg ggaggaacca
 660
 cccattgttc ggagaagaat aggaacagcc ttcaaactgg atgaacagaa aatcctgccc
 720
 aaaggagagg aagctgaact ggaacgcctg gaacgagagt ttgccattca gtcccagatt
 780
 acggaggccg cccgccgcct agccagtgcac cccaac
 816

<210> 3612

<211> 272

<212> PRT

<213> Homo sapiens

<400> 3612

Tyr Gly Val His Tyr Tyr Ala Val Lys Asp Lys Gln Gly Ile Pro Trp
 1 5 10 15
 Trp Leu Gly Leu Ser Tyr Lys Gly Ile Phe Gln Tyr Asp Tyr His Asp
 20 25 30
 Lys Val Lys Pro Arg Lys Ile Phe Gln Trp Arg Gln Leu Glu Asn Leu
 35 40 45
 Tyr Phe Arg Glu Lys Lys Phe Ser Val Glu Val His Asp Pro Arg Arg
 50 55 60
 Ala Ser Val Thr Arg Arg Thr Phe Gly His Ser Gly Ile Ala Val His
 65 70 75 80
 Thr Trp Tyr Ala Cys Pro Ala Leu Ile Lys Ser Ile Trp Ala Met Ala
 85 90 95
 Ile Ser Gln His Gln Phe Tyr Leu Asp Arg Lys Gln Ser Lys Ser Lys
 100 105 110
 Ile His Ala Ala Arg Ser Leu Ser Glu Ile Ala Ile Asp Leu Thr Glu

<400> 3614

```

Met Gln Ser Val Thr Arg Pro Gly Ile Pro Met Cys Ala Gln Leu Ala
 1           5           10           15
His Ser Ile Ile Val Pro Arg Lys Leu Leu Gln Phe Ile Lys Ser Ser
      20           25           30
Gly Leu Gly Ile Ser Leu Asn Ser Lys Arg Arg Lys Glu Glu Thr Phe
      35           40           45
Pro Thr Arg Cys Gly Cys Asp Ala Ser Gln Gly Pro Gln Gly His Cys
      50           55           60
Pro Arg Ala His Arg Pro Pro Leu Thr Ala Thr Gly Ala Trp Ile Arg
      65           70           75           80
Ser Tyr Ile Val Gln Ser Phe Arg Pro Leu Pro Trp Ser Thr Arg Thr
      85           90           95
Arg Ala Arg Ile Ser Gly Arg Ala His Thr His Ser Tyr Thr Arg Thr
      100          105          110
Gln Thr Arg Ser Glu Lys Ser Pro Pro Pro Pro
      115          120

```

<210> 3615

<211> 1388

<212> DNA

<213> Homo sapiens

<400> 3615

```

nnggcagagc ctcccgaaga aaagggagcc gcgcagcgcc tacgggagtc cggcggcagc
60
agccggtacc ggcaaccacg ggcagctctc agggaatctc cgctcgtgagg ccagaggctc
120
cagtccccgc gagtccagat gcctgtccag cctccaagca aagacacaga agagatggaa
180
gcagagggtg attctgctgc tgagatgaat ggggaggagg aagagagtga ggaggagcgg
240
agcggcagcc agacagagtc agaagaggag agctccgaga tggatgatga ggactatgag
300
cgacgccgca gcgagtgtgt cagtgagatg ctggacctag agaagcagtt ctcggagcta
360
aaggagaagt tggtcagga acgactgagt cagctgcggt tgcggctgga ggaagtggg
420
gctgagagag ccctgaata cacggagccc cttggggggc tgcagcggag cctcaagatt
480
cgcatccagg tggcagggat ctacaagggc ttctgtctgg atgtgatcag gaataagtac
540
gaatgtgagc tgcagggagc caaacagcac ctggagagtg agaagctgct gctctatgac
600
acgctgcagg gggagctgca ggagcggatc cagaggctgg aggaggaccg ccagagcctg
660
gacctcagct ctgaatggtg ggacgacaaa ctgcacgcca gaggcagctc caggtcttgg
720
gactccctgc cgcccagcaa gaggaagaag gcacctctgg tttctggccc atacatcgtg
780
tacatgcttc aagagatcgg catcctggag gactggacag ccatcaaaaa ggctagggca
840
gctgtgtccc ctcagaagag aaaatcggat gacaggcgga ccacaggcc cctcagggtc
900

```

tgcccagcca ggctcctgtg gtgctgctgg gccctccac tccatctggc actggcctgg
 960
 actcctctc tgccctctc gaggcctgca cagctgtggc cgtggagctg acctgaccag
 1020
 gcaaggctgc tgtctccatc cctgagccgc ctgccacctc ccactcctga agatccatct
 1080
 cttggggctc ccctgacaga gaagacagcc gaagtcaaag ccacatcctc ttgctgatgt
 1140
 tggatgcagg ctgtccggcc tcagggccag ggagccagtt tccactgtgc gggaactctg
 1200
 agtcagacgt gattatctgg gggctctgtcc accctggctg gatctggagg caagatgccca
 1260
 ggccccccag gtgttctcag ggcagttctt ggtgtctgct tctcagattc caaggactgg
 1320
 aattaaaacc tttcctggga ctctggaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1380
 aaaaaaaaa
 1388

<210> 3616

<211> 290

<212> PRT

<213> Homo sapiens

<400> 3616

Met	Pro	Val	Gln	Pro	Pro	Ser	Lys	Asp	Thr	Glu	Glu	Met	Glu	Ala	Glu
1			5					10						15	
Gly	Asp	Ser	Ala	Ala	Glu	Met	Asn	Gly	Glu	Glu	Glu	Glu	Ser	Glu	Glu
			20				25						30		
Glu	Arg	Ser	Gly	Ser	Gln	Thr	Glu	Ser	Glu	Glu	Glu	Ser	Ser	Glu	Met
			35				40					45			
Asp	Asp	Glu	Asp	Tyr	Glu	Arg	Arg	Arg	Ser	Glu	Cys	Val	Ser	Glu	Met
			50			55					60				
Leu	Asp	Leu	Glu	Lys	Gln	Phe	Ser	Glu	Leu	Lys	Glu	Lys	Leu	Phe	Arg
65					70					75				80	
Glu	Arg	Leu	Ser	Gln	Leu	Arg	Leu	Arg	Leu	Glu	Glu	Val	Gly	Ala	Glu
				85					90					95	
Arg	Ala	Pro	Glu	Tyr	Thr	Glu	Pro	Leu	Gly	Gly	Leu	Gln	Arg	Ser	Leu
			100					105					110		
Lys	Ile	Arg	Ile	Gln	Val	Ala	Gly	Ile	Tyr	Lys	Gly	Phe	Cys	Leu	Asp
			115				120					125			
Val	Ile	Arg	Asn	Lys	Tyr	Glu	Cys	Glu	Leu	Gln	Gly	Ala	Lys	Gln	His
			130			135					140				
Leu	Glu	Ser	Glu	Lys	Leu	Leu	Leu	Tyr	Asp	Thr	Leu	Gln	Gly	Glu	Leu
145				150						155				160	
Gln	Glu	Arg	Ile	Gln	Arg	Leu	Glu	Glu	Asp	Arg	Gln	Ser	Leu	Asp	Leu
				165					170					175	
Ser	Ser	Glu	Trp	Trp	Asp	Asp	Lys	Leu	His	Ala	Arg	Gly	Ser	Ser	Arg
			180				185						190		
Ser	Trp	Asp	Ser	Leu	Pro	Pro	Ser	Lys	Arg	Lys	Lys	Ala	Pro	Leu	Val
			195				200					205			
Ser	Gly	Pro	Tyr	Ile	Val	Tyr	Met	Leu	Gln	Glu	Ile	Gly	Ile	Leu	Glu
			210			215					220				
Asp	Trp	Thr	Ala	Ile	Lys	Lys	Ala	Arg	Ala	Ala	Val	Ser	Pro	Gln	Lys

225									230									235									240
Arg	Lys	Ser	Asp	Asp	Arg	Arg	Thr	His	Arg	Pro	Leu	Arg	Val	Cys	Pro												
				245					250					255													
Ala	Arg	Leu	Leu	Trp	Cys	Cys	Trp	Ala	Leu	Pro	Leu	His	Leu	Ala	Leu												
				260					265					270													
Ala	Trp	Thr	Pro	Pro	Leu	Pro	Ser	Ser	Arg	Pro	Ala	Gln	Leu	Trp	Pro												
				275					280					285													
Trp	Ser																										
290																											

```
<210> 3617
<211> 804
<212> DNA
<213> Homo sapiens
```

<400> 3617
nnccaacctg catgagattc agttttggccg aacctttccag catcagcttc gagattctgg
60
ggctttaaca gcaagggaga ggtgcatggg atcaatggga cccaatgggg ccagactctg
120
aggatgggat ggtagtagtg aaggacatag gatgggggta gagtgtggag actttttgaa
180
atagtataga tgaatgccct gaggggactg tgaacaagct ctgccccctct taggaaatca
240
atgggggaatc aactaaatta aataaaaaat ggggtcaaga ttaagaggca gggtcaccca
300
gggaatggtt taggtcctgg catctttgaa ggggttgga gggctggcag gaggcactga
360
gggccctggg ccctggggcca ggtggtgaat tacagcgact cacggacagc agaagagatc
420
tgtgagagca gctccaagat gatcaccttc atcgacctgg caggccacca taagtaccta
480
cacaccacca tctttggcct cacatcatac tgccccgact gcgccctgct cctcgtcagt
540
gccaacactg ggattgctgg caccacaagg gaacatctgg ggctggccct ggccctgaaa
600
gtgcccttct tcatcggtgt cagcaagatc gacctatgtg ccaagaccac agtggagagg
660
acagtacgcc agctggagcg ggtcctcaag cagcctggct gccacaaggc ccccatgctg
720
gtcacctctg aggatgatgc cgtcactgct gcccagcagt ttgctcagtc acccaatgtc
780
acccccatct tcacattgtc cagt
804

```
<210> 3618
<211> 148
<212> PRT
<213> Homo sapiens
```

<400> 3618
Gly Pro Trp Ala Leu Gly Gln Val Val Asn Tyr Ser Asp Ser Arg Thr
1 5 10 15
Ala Glu Glu Ile Cys Glu Ser Ser Ser Lys Met Ile Thr Phe Ile Asp

[illegible]

```
<210> 3619
<211> 948
<212> DNA
<213> Homo sapiens
```

```

<400> 3619
acgcgctcggc agaggtggct tgcgtcccgcg gagtccaggc ttcagctcct ggcttctctt
60
ctttctctcct agagatcaga tgtcgggaact ccagctgagg gcatgtctta ctgggcacgc
120
aggtgtcctc tcttgagaag aactgtccat accatggtgg tggttaaggct ttcaccagtl
180
ctcaggatgc ccatagggat ggggtgaagcc tgcctggcct gtggtgcttt ccagtggccg
240
tcattctcatt agggccccac agtggcatta ggatgcacct ctcggcggtg ttcaacgccc
300
tcctggtgtc ggtgctggca gcggtcctgt ggaagcatgt gcggctgcgt gagcatgcag
360
ccacactgga ggaggagctg gccctcagcc gacaggccac agagccagcc ccagcactga
420
ggatcgacta cccgaaggca ctgcagatcc tgatggaggg cggcacacac atggtgtgca
480
cgggccgcac gcacacagac cgcattctgcc gcttcaagtg gctctgctac tccaacgagg
540
ctgaggagtt catcttcttc catggcaaca cctctgtcat gctgcccac ctgggctccc
600
ggcgcttcca gccagccctg ctcgacctat ccaccgtgga ggaccacaac actcagtact
660
tcaacttcgt ggagctgcct gctgctgccc tgcgcttcat gcccaagccg gtgttcgtgc
720
cagacgtggc cctcatcgcc aaccgcttca accccgacaa cctcatgcac gtctttcatg
780
acgacctgct gccactcttc tacaccctgc ggcagtttcc cggcctggcc cacgaggcac
840
ggctcttctt catggagggc tggggcgagg gtgcacactt cgacctctac aagctgctca
900

```

gccccaaagca gcctctcctg cgggcacagc tgaagaccct gggccggc
948

<210> 3620
<211> 159
<212> PRT
<213> Homo sapiens

<400> 3620
Trp Arg Ala Ala His Thr Trp Cys Ala Arg Ala Ala Arg Thr Gln Thr
1 5 10 15
Ala Ser Ala Ala Ser Ser Gly Ser Ala Thr Pro Thr Arg Leu Arg Ser
20 25 30
Ser Ser Ser Ser Met Ala Thr Pro Leu Ser Cys Cys Pro Thr Trp Ala
35 40 45
Pro Gly Ala Ser Ser Gln Pro Cys Ser Thr Tyr Pro Pro Trp Arg Thr
50 55 60
Thr Thr Leu Ser Thr Ser Thr Ser Trp Ser Cys Leu Leu Leu Pro Cys
65 70 75 80
Ala Ser Cys Pro Ser Arg Cys Ser Cys Gln Thr Trp Pro Ser Ser Pro
85 90 95
Thr Ala Ser Thr Pro Thr Thr Ser Cys Thr Ser Phe Met Thr Thr Cys
100 105 110
Cys His Ser Ser Thr Pro Cys Gly Ser Phe Pro Ala Trp Pro Thr Arg
115 120 125
His Gly Ser Ser Ser Trp Arg Ala Gly Ala Arg Val His Thr Ser Thr
130 135 140
Ser Thr Ser Cys Ser Ala Pro Ser Ser Leu Ser Cys Gly His Ser
145 150 155

<210> 3621
<211> 2934
<212> DNA
<213> Homo sapiens

<400> 3621
cccggggcga gacgggtgctt tcgcggcgtg tgcttgcagg agcgcacagt tcaggcgccg
60
ggacaagctg ttgggggtgtg agtgagctct ccagaatggc acatggctcc ggggtgcccg
120
ggttaaaagg aaggatttgc acaccttcca cttagggtc gggtaatccc aaacttctc
180
ccttaattgg gcttgcagtg ctaaaaagca gatcggttctc tctgaggttt tcccaacagt
240
acctcaagaa aataacatct gttttttgta acgttcaca gtattcggaa ttggctacag
300
aacataataa gatccttgcc agcacattac agaataatttt tgttgaacct tcttgagaat
360
tcagagaaac tgctgagtga ccaactgaacg aaaagatcta atcttaaggc ttacgcgtgt
420
tccatccacc acatcagaac aatgtcgtat gtttttgtaa atgattcttc tcagactaac
480
gtgcccttgc tgcaagcctg tattgatggg gactttaatt attccaagcg gcttttggaa
540

agtggctttg acccaaatat tcgtgacagc aggggcagaa caggccttca ccttgcagca
600
gctcgagggg atgtagacat ctgccagtta ctgcataaat tcggtgccga tcttctggcc
660
acagattatc aaggaaacac agctcttcac ctctgtggcc atgtggatac tatccaattt
720
ttggtttcca atggactcaa aattgatatt tgcaatcatc aagggtgctac ccctttagtt
780
ctggcaaagc gcagaggagt aaataaagat gtcacccgat tgctggaatc tttggaagaa
840
caggaggtga aaggatttaa cagaggaacc cactcgaaac tggagaccat gcaaacagct
900
gagagtgaat gtgccatgga aagccattca ctccctcaatc ccaacctgca gcaaggtgaa
960
ggagtcctct ccagcttccg aaccacgtgg caggagtttg tggaggatct gggcttctgg
1020
agagtattgc tgttgatctt cgtcattgct ttgctgtctc ttggcattgc ttattatgtg
1080
agtggggtgc tacccttcgt ggaaaaccag cctgaactgg tgcattaaag gagctcatgg
1140
aagatgaggc aattaatttc ctgtttcctg gcttccaatg tttgttctca gtttctcaga
1200
atttttctta gcgcaaagca gtgagggcag tacatgttct ttttgcatct ttaattattg
1260
taatcctttt agataatgat gtgttcattt gaactaacta catactatga tcaagtatat
1320
tgcacctaata cgtacacct gactcaacct gactttgtag gaaagcctac acgtagcctt
1380
gtttgataaa aacacggaag tgactagaga atggaagata aaggaagaag ctaggaagtc
1440
cttgctatca aaaccttacc ctaatatagg accaattgaa gtattcaaaa agaaaaacag
1500
tatcttatat gattagtttt tgttggtggt tttgttttca tttatttttg caagagccac
1560
tttttattta ctttctctag ggataagaga taaaacttga agtacttttt tcaaactctg
1620
tgtgcaaatt agtattgtta gcatctattt ggcttatttt agtattttta agtctagtca
1680
caaaccaaac aaaacttttg aaaatgagct atattttgtt caaagataat tgatttgatc
1740
ttatatttat ttgttttttag gataattttt gatctttttg taaactgctt tgcttgtaa
1800
tatctgtgaa aaataaatga gttcattttg ttcactttcc aattttcccg agtatcctag
1860
tcatcaaaga taacagttca tcagaattac agtcagaaaa tcctttttct actgaatagt
1920
tagcagggaa aaataattct gatatttaac tgcataaatt ctgtagtgct attatagtga
1980
aaaactcagt tctataagct agctgtgttg tcacagtttt atcatagttc ataattattt
2040
catgtgcaat cctatttgga ggccctgtta gacttttaac aatcccatcc atatctgtaa
2100
ttctctgatg gcaagaatgg atggagcatt tctgagttaa cagtgtctga cagtatcgta
2160

ctgggtgtca taaactcttt atgaatggta atattatgta aattgaaatc tggccctcaa
 2220
 actatattgc agctttcagc agtatgtttg aaggcctctt ttgttaatga ttctgtaatg
 2280
 tatgaattat gttcttgagt ggtaaaaaa gaatatgaag gcttgataat tatttattgg
 2340
 gtaaagtcag gaaattgtag tgaaagaact aatgggtttg ttttttgga taaaggcacc
 2400
 taagctattg ctaattgaat tgctgctaga attagaaatt atgctttaga atagaattgg
 2460
 tatttctgtg attctttttg cttcttggtg ttttctcttg tatctatgta tctagtattg
 2520
 aggcttgctc tttcatgtgg ctttatectc tctttaatag ctgttgtaaa attcctgagt
 2580
 aactggctgc ttcaggatca gcttgagag tcttgctttt aggttagata caaacaagt
 2640
 aaatcatagt tgggtgtaaat ccagcaaaaa acagctggct ttggaatgga gaacactaca
 2700
 attcaaattt gaagtatatt cagaagaaaa ctttgggaatt agctttacat ttgtttgtaa
 2760
 atctaaacaa atatgcaaaa ttggtcaaaa tgtaagtata tagcattttt aaagattaat
 2820
 ggttcctttt atgtgctgat ttctttgtat tctgttctct gcattcatca ttcaggaata
 2880
 ccaccaataa atgtatttat atatccctta aaaaaaaaaa aaaaaaaaaa aaaa
 2934

<210> 3622

<211> 228

<212> PRT

<213> Homo sapiens

<400> 3622

Met	Ser	Tyr	Val	Phe	Val	Asn	Asp	Ser	Ser	Gln	Thr	Asn	Val	Pro	Leu
1			5					10						15	
Leu	Gln	Ala	Cys	Ile	Asp	Gly	Asp	Phe	Asn	Tyr	Ser	Lys	Arg	Leu	Leu
		20					25					30			
Glu	Ser	Gly	Phe	Asp	Pro	Asn	Ile	Arg	Asp	Ser	Arg	Gly	Arg	Thr	Gly
	35					40					45				
Leu	His	Leu	Ala	Ala	Ala	Arg	Gly	Asn	Val	Asp	Ile	Cys	Gln	Leu	Leu
	50					55				60					
His	Lys	Phe	Gly	Ala	Asp	Leu	Leu	Ala	Thr	Asp	Tyr	Gln	Gly	Asn	Thr
65				70					75					80	
Ala	Leu	His	Leu	Cys	Gly	His	Val	Asp	Thr	Ile	Gln	Phe	Leu	Val	Ser
			85					90					95		
Asn	Gly	Leu	Lys	Ile	Asp	Ile	Cys	Asn	His	Gln	Gly	Ala	Thr	Pro	Leu
		100					105					110			
Val	Leu	Ala	Lys	Arg	Arg	Gly	Val	Asn	Lys	Asp	Val	Ile	Arg	Leu	Leu
	115					120					125				
Glu	Ser	Leu	Glu	Glu	Gln	Glu	Val	Lys	Gly	Phe	Asn	Arg	Gly	Thr	His
	130				135					140					
Ser	Lys	Leu	Glu	Thr	Met	Gln	Thr	Ala	Glu	Ser	Glu	Ser	Ala	Met	Glu
145				150					155					160	
Ser	His	Ser	Leu	Leu	Asn	Pro	Asn	Leu	Gln	Gln	Gly	Glu	Gly	Val	Leu

```

                165                170                175
Ser Ser Phe Arg Thr Thr Trp Gln Glu Phe Val Glu Asp Leu Gly Phe
                180                185                190
Trp Arg Val Leu Leu Leu Ile Phe Val Ile Ala Leu Leu Ser Leu Gly
                195                200                205
Ile Ala Tyr Tyr Val Ser Gly Val Leu Pro Phe Val Glu Asn Gln Pro
                210                215                220
Glu Leu Val His
225

```

<210> 3623

<211> 586

<212> DNA

<213> Homo sapiens

<400> 3623

```

ctgtgtgcat tcaatgcgtg agctgcgacc taagcagaga tctaacaaga caatgaggca
60
gtgttccagg gtatccatta aaaccggcgt gggcaactac atgttgatta aaccttccga
120
ggcagcaaaa tgtgggcaca gcgccatgtc tgggttctgc agctgtttga tgatcctctt
180
gcggaatttc tccctcacac gattaaattc cattatgtcc atggggtcct cttcgatcca
240
aaacttatga aattcatgca tcaaatagca gaatgtttgc tgaaagtgag acaatgttgg
300
agcttctggg gcgatattgt agaaatgggt ttttagagct ccgctgacca gtagattata
360
tgccagggtca gttatattga tgcccacaat tgcaaatgag tacccaattg cttatccat
420
ccttttcttc tccattctg ctttgctgaa tttgcttatt tcttctttag tgatatccct
480
gcatttcgga tgaagagagt cagacaggac ctgctgagct gctgtggcat ccctttccgc
540
gaaatactgc aaattgtaca gtcccagaag tccattcct cgaaag
586

```

<210> 3624

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3624

```

Met Gly Leu Leu Gly Leu Tyr Asn Leu Gln Tyr Phe Ala Glu Arg Asp
1                5                10                15
Ala Thr Ala Ala Gln Gln Val Leu Ser Asp Ser Leu His Pro Lys Cys
                20                25                30
Arg Asp Ile Thr Lys Glu Glu Ile Ser Lys Phe Ser Lys Ala Glu Trp
                35                40                45
Glu Lys Lys Arg Met Asp Lys Ala Ile Gly Tyr Ser Phe Ala Ile Val
                50                55                60
Gly Ile Asn Ile Thr Asp Leu Ala Tyr Asn Leu Leu Val Ser Gly Ala
65                70                75                80
Leu Lys Thr His Phe Tyr Asn Ile Ala Pro Glu Ala Pro Thr Leu Ser

```

				85					90					95	
His	Phe	Gln	Gln	Thr	Phe	Cys	Tyr	Leu	Met	His	Glu	Phe	His	Lys	Phe
			100						105					110	
Trp	Ile	Glu	Glu	Asp	Pro	Met	Asp	Ile	Met	Glu	Phe	Asn	Arg	Val	Arg
		115					120					125			
Glu	Lys	Phe	Arg	Lys	Arg	Ile	Ile	Lys	Gln	Leu	Gln	Asn	Pro	Asp	Met
		130				135					140				
Ala	Leu	Cys	Pro	His	Phe	Ala	Ala	Ser	Glu	Gly	Leu	Ile	Asn	Met	
145					150					155					

<210> 3625

<211> 4799

<212> DNA

<213> Homo sapiens

<400> 3625

naaataaaca tcatcatcta tgtgtaatca aattcccata tttcttctct ataaagaatt
60

tgcttttagtt tttcaataag gcattttttt gtcatccaaa catctcttcc ttttaaaatt
120

ttcttagagt taaaaccata aataagagga tttaaaccac taaaatgaca cgtgccaca
180

tcttcattca gccagacctg gtaaattcta tcaaaactag acagttaa at aagaaccacg
240

ttataaaaaat attagccaaa aaaagactat tagataattc tgcaaactca aatatgaaac
300

tgtgctaaac aaaatatgtg caaagggtaca caagcataga gccacgttgg gggttatgct
360

cagattagtt ttaaagctcc ctctagtgga ttttaattcaa gagttgtcca cgggtgggtggt
420

gtttactttg aactcacacg agtcaaagaa aaataaaaata tgcacaacca cttccccaaa
480

aggtgtctta tggagccggg gcttcacgt gtccacaccc aggactgcct ggggtgtccc
540

tagggctggg ggggtggggag gacaaagaca aggccactgt cccaagtctt gggccaggca
600

acatcctgga gaccctcggg ctgaggttag gggcaagggc aacactgatg actccacgtc
660

ctcgtccaag gcctcagagg agccctgccg ggacctcagt gctttggagg aggtggtgag
720

agcaggccag gctgaggggc ctgccttgaaggcgagggt ctgagggttg gggctgtaaa
780

gacagccctt tcatcaggaa gctggagctg aaaagcccta atacccctaa tccccaaact
840

cttggatccc gtccacaga cgagagtcct tgctcggcat cctccagcac aggtgctctg

ggtaggggtccc aggccagggc actagagaag gaaaggggtg gttgtgccag tggcctgggc
960

tgctgatggg ggtataccca cactgcccac catgttcac accaggggc ccagtgggtg
1020

cagagaggaa ccagtggccc ccagagctgg ctgtggggcc gcggagggtca tcgaggccac
1080

agccatggac tccactcctg ggccaggccc aaaggatgtg ctggtcccca ggactgggct
1140

ccccgaagc tggttcagtg tcagcggctg gggctgggtc acctggaaaag ggtaaacagg
1200
ggccgaggtg gcgggagcac ctggtgccag gaaagggttg agggactggg ctggtggggc
1260
aggcctggtc accagtgagt ccaggttcac cagggccgcg ttggggccca ggaaggactc
1320
aggtgttttc cgggcactgc tgggcttgct tgaggcgaca gtcaggggtt gagactcaaa
1380
ggggtcaggg ctggtagttc cattgttttg ggatggcaga gaggtcacag attcggtctg
1440
tttttttgaa gtccgaaggc tgtcaaattc agaaaagtca tctttaattg taccattcag
1500
attactgaag agctcaaagg acccagagac agacacgggc ttggtggtgg agactgcgcc
1560
ccacgcgtca gaagctcttt tcccagcact ggaggcaggc tgctgtgaag ctgcccaggg
1620
gtccgagttc ttggggacag attgtgcggt ggctccagtg ggcaccccc atgggtcaat
1680
ggaggcagct ggcttggtac caaacgatgg ccaggggtct gaagtactcg caggagccgc
1740
tggcccgcgc caggggttgg tctggttagt ggaggctgac gggccccagg gctctgcttt
1800
ctgggccgcg gggccccgagc tggggagagc atccattaaa tccaacagcg tagtctgctg
1860
tgggagagag ccatgctctt tcttttttgg aattttaact gtgtcccttc ggctttcttc
1920
cagggccatc tgtaatctga ggtcatcacc ccgcctgagg cgttcttcct gctcagccac
1980
ttctctgctc atggcaagtg ccagctgcag ctgaagctcc tcttctccac tagtgtgggg
2040
ccgggcttgc tccagctcgg aggacactcg cggggaggtg gagccatggt aggaggccgg
2100
ggagcccccg gccttgccat actcctgctc cgagtggctg gtggagaggt tgggctggct
2160
ggagcctcgc ccaaagggtga tctggttgct gcccatgcca gtggcaacct gggccatgcg
2220
ctctttgggt ttgagagcct gggccctctc agccttcaac cgttctctgt cgcgagcag
2280
ggccaccagt tgctttgact tctcagcac attgatgcc ttggtccttg catctcggtc
2340
aatgtactgg aagtccttca gggctctggat ggcgtacatg ttctcccggc actgctgcga
2400
cacgcgtcc gagcctgtct tgatgaggta gtccagcagc gtcagcgcct tgtacacatg
2460
ccgccagttc ttgccatggt cattcagccg ctccacacc atgctcatga tctccgagaa
2520
ggccaccacg ttgtaggtca ggtcggcaat ctcggtcatc agagaactgg acgggcccc
2580
ggggtcattg gaggtggctt cccggacttt gattttctgcc tctgagtaat tggtcacgat
2640
gtccagcacc tgccgcagcc ttcggtccggg agtcgcccc tctctccacg catcggggcc
2700
ctgtgcccc tctgtgtgca gccgggcacc atgtcgacct cgtccttgag gcgccagatg
2760

aagaacatcg tccacaacta ctcagaggcg gagatcaagg ttcgagaggc cacgagcaat
2820
gaccctggg gccatccag ctccctcatg tcagagattg ccgacctcac ctacaacgtt
2880
gtcgccttct cggagatcat gagcatgac tggaagcggc tcaatgacca tggcaagaac
2940
tggcgtcacg tttacaaggc catgacgctg atggagtacc tcatcaagac cggctcggag
3000
cgcgtgtcgc agcagtgcaa ggagaacatg tacgccgtgc agacgctgaa ggacttccag
3060
tacgtggacc gcgacggcaa ggaccagggc gtgaacgtgc gtgagaaagc taagcagctg
3120
gtggccctgc tgcgcgacga ggaccggctg cgggaagagc gggcgcacgc gctcaagacc
3180
aaggaaaagc tggcacagac cgccacggcc tcatcagcag ctgtgggctc aggccccct
3240
cccagggcgg agcaggcgtg gccgcagagc agcggggagg aggagctgca gctccagctg
3300
gccctggcca tgagcaagga ggaggccgac caggaggagc ggatccgtcg cggggatgac
3360
ctgcggctgc agatggcaat cgaggagagc aagagggaga ctgggggcaa ggaggagtgc
3420
tccctcatgg accttctga cgtcttcacg gccccagctc ctgccccgac cacagacccc
3480
tgggggggccc cagcacccat ggctgctgcc gtccccacgg ctgccccac ctcggacccc
3540
tggggcgccc cccctgtccc tccagctgct gatccctggg gaggtccagc cccacgccc
3600
gcctctgggg acccctggag gcctgctgcc cctgcaggac cctcagttga cccttgggg
3660
gggacccccag cccctgcagc tggggagggg cccacgcctg atccatgggg aagttccgat
3720
ggtgggggtcc cggtcagtgg gccctcagcc tccgatccct ggacaccggc cccggccttc
3780
tcagatccct ggggagggtc acctgccaa cccagcacca atggcacaac aacagccggg
3840
ggattcgaca cggagcccga cgagttctct gactttgacc gactccgcac ggcactgccg
3900
acctccggga gcagcgcagg agagctggag ctgctggcag gagagggtgc ggcccgaagc
3960
cctggggcgt ttgacatgag tggggtcagg ggatctctgg ctgaggctgt gggcagcccc
4020
ccacctgcag ccacaccaac tcccacgccc cccaccgga agacgccgga gtcattcctg
4080
gggcccaatg cagccctcgt cgacctggac tcgctggtga gccggccggg cccacgccc
4140
cctggagcca aggccctcaa ccccttcctg ccaggcggag gccagccac tggcccttc
4200
gtcaccaacc ccttcagcc cgcgcctccc gcgacgtca cctgaacca gctccgtctc
4260
agtccgtgc ctcccgctccc tggagcgcca cccacgtaca tctctccctc tggggggggc
4320
cctggcctgc ccccatgat gccccgggc ccccgggcc ccaacactaa tcccttctc
4380

ctataatcca gggcggaatg gggcctggct ccacccggct gccccattcc ggctccctgg
 4440
 gagatcagtg ttgtgagtgc atgtgaaatg gggatcccca ccccatggc ccttccccctt
 4500
 cctggggccc actcacacta caccctcttc ctttcccacc ccacctcccc ggagagaaac
 4560
 tggacatggg gcctggggag gggagctggc cagaggagga cccctttccc gtggcattag
 4620
 aagggggagg ggtgctgggg accccaccca ttccccctcc ctccaaactc ccaacccccca
 4680
 gtcagtgttt gagcctcctc gttccccctca cgcaccgctc acgcaccctc ggtgaatcct
 4740
 tggatgatgat tttggcaact ttgggaataa atggcaattc ccacgggctt ggcaaaaaa
 4799

<210> 3626

<211> 551

<212> PRT

<213> Homo sapiens

<400> 3626

Met	Ser	Thr	Ser	Ser	Leu	Arg	Arg	Gln	Met	Lys	Asn	Ile	Val	His	Asn
1				5					10					15	
Tyr	Ser	Glu	Ala	Glu	Ile	Lys	Val	Arg	Glu	Ala	Thr	Ser	Asn	Asp	Pro
			20					25					30		
Trp	Gly	Pro	Ser	Ser	Ser	Leu	Met	Ser	Glu	Ile	Ala	Asp	Leu	Thr	Tyr
		35				40					45				
Asn	Val	Val	Ala	Phe	Ser	Glu	Ile	Met	Ser	Met	Ile	Trp	Lys	Arg	Leu
	50					55					60				
Asn	Asp	His	Gly	Lys	Asn	Trp	Arg	His	Val	Tyr	Lys	Ala	Met	Thr	Leu
65					70					75					80
Met	Glu	Tyr	Leu	Ile	Lys	Thr	Gly	Ser	Glu	Arg	Val	Ser	Gln	Gln	Cys
				85					90					95	
Lys	Glu	Asn	Met	Tyr	Ala	Val	Gln	Thr	Leu	Lys	Asp	Phe	Gln	Tyr	Val
			100					105					110		
Asp	Arg	Asp	Gly	Lys	Asp	Gln	Gly	Val	Asn	Val	Arg	Glu	Lys	Ala	Lys
		115					120					125			
Gln	Leu	Val	Ala	Leu	Leu	Arg	Asp	Glu	Asp	Arg	Leu	Arg	Glu	Glu	Arg
	130					135					140				
Ala	His	Ala	Leu	Lys	Thr	Lys	Glu	Lys	Leu	Ala	Gln	Thr	Ala	Thr	Ala
145					150					155					160
Ser	Ser	Ala	Ala	Val	Gly	Ser	Gly	Pro	Pro	Pro	Glu	Ala	Glu	Gln	Ala
				165					170					175	
Trp	Pro	Gln	Ser	Ser	Gly	Glu	Glu	Glu	Leu	Gln	Leu	Gln	Leu	Ala	Leu
			180					185					190		
Ala	Met	Ser	Lys	Glu	Glu	Ala	Asp	Gln	Glu	Glu	Arg	Ile	Arg	Arg	Gly
	195						200				205				
Asp	Asp	Leu	Arg	Leu	Gln	Met	Ala	Ile	Glu	Glu	Ser	Lys	Arg	Glu	Thr
	210					215					220				
Gly	Gly	Lys	Glu	Glu	Ser	Ser	Leu	Met	Asp	Leu	Ala	Asp	Val	Phe	Thr
225					230					235					240
Ala	Pro	Ala	Pro	Ala	Pro	Thr	Thr	Asp	Pro	Trp	Gly	Gly	Pro	Ala	Pro
				245					250					255	
Met	Ala	Ala	Ala	Val	Pro	Thr	Ala	Ala	Pro	Thr	Ser	Asp	Pro	Trp	Gly

260 265 270
 Gly Pro Pro Val Pro Pro Ala Ala Asp Pro Trp Gly Gly Pro Ala Pro
 275 280 285
 Thr Pro Ala Ser Gly Asp Pro Trp Arg Pro Ala Ala Pro Ala Gly Pro
 290 295 300
 Ser Val Asp Pro Trp Gly Gly Thr Pro Ala Pro Ala Ala Gly Glu Gly
 305 310 315 320
 Pro Thr Pro Asp Pro Trp Gly Ser Ser Asp Gly Gly Val Pro Val Ser
 325 330 335
 Gly Pro Ser Ala Ser Asp Pro Trp Thr Pro Ala Pro Ala Phe Ser Asp
 340 345 350
 Pro Trp Gly Gly Ser Pro Ala Lys Pro Ser Thr Asn Gly Thr Thr Thr
 355 360 365
 Ala Gly Gly Phe Asp Thr Glu Pro Asp Glu Phe Ser Asp Phe Asp Arg
 370 375 380
 Leu Arg Thr Ala Leu Pro Thr Ser Gly Ser Ser Ala Gly Glu Leu Glu
 385 390 395 400
 Leu Leu Ala Gly Glu Val Pro Ala Arg Ser Pro Gly Ala Phe Asp Met
 405 410 415
 Ser Gly Val Arg Gly Ser Leu Ala Glu Ala Val Gly Ser Pro Pro Pro
 420 425 430
 Ala Ala Thr Pro Thr Pro Thr Pro Thr Arg Lys Thr Pro Glu Ser
 435 440 445
 Phe Leu Gly Pro Asn Ala Ala Leu Val Asp Leu Asp Ser Leu Val Ser
 450 455 460
 Arg Pro Gly Pro Thr Pro Pro Gly Ala Lys Ala Ser Asn Pro Phe Leu
 465 470 475 480
 Pro Gly Gly Gly Pro Ala Thr Gly Pro Ser Val Thr Asn Pro Phe Gln
 485 490 495
 Pro Ala Pro Pro Ala Thr Leu Thr Leu Asn Gln Leu Arg Leu Ser Pro
 500 505 510
 Val Pro Pro Val Pro Gly Ala Pro Pro Thr Tyr Ile Ser Pro Leu Gly
 515 520 525
 Gly Gly Pro Gly Leu Pro Pro Met Met Pro Pro Gly Pro Pro Ala Pro
 530 535 540
 Asn Thr Asn Pro Phe Leu Leu
 545 550

<210> 3627

<211> 1760

<212> DNA

<213> Homo sapiens

<400> 3627

ggcgaaggag atcagcagga cgctgcgcac aacatgggca accacctgcc gctcctgcct
 60
 gcagagagtg aggaagaaga tgaaatggaa gttgaagacc aggatagtaa agaagccaaa
 120
 aaaccaaaca tcataaattt tgacaccagt ctgccgacat cacatacata cctaggtgct
 180
 gatatggaag aatttcattg caggactttg cacgatgacg acagctgtca ggtgattcca
 240
 gttcttccac aagtgatgat gatcctgatt cccggacaga cattacctct tcagcttttt
 300

caccctcaag aagtcagtat ggtgcggaat ttaattcaga aagatagaac ctttgcgtgt
360
cttgcataca gcaatgtaca ggaaagggaa gcacagtttg gaacaacagc agagatatat
420
gcctatcgag aagaacagga ttttggaatt gagatagtga aagtgaagc aattggaaga
480
caaagggttca aagtccttga gctaagaaca cagtcagatg gaatccagca agctaaagtg
540
caaattcttc ccgaatgtgt gttgccttca accatgtctg cagttcaatt agaatccctc
600
aataagtgcc agatatttcc ttcaaacct gtctcaagag aagaccaatg ttcatatataa
660
tggtggcaga aataccagaa gagaaagttt cattgtgcaa atctaacttc atggcctcgc
720
tggtgtatt ccttatatga tgctgagacc ttaatggaca gaatcaagaa acagctacgt
780
gaatgggatg aaaatctaaa agatgattct ctccctcaa atccaataga ttttcttac
840
agagtagctg cttgtcttcc tattgatgat gtattgagaa ttcagctcct taaaattggc
900
agtgtatcc agcgacttcg ctgtgaatta gacattatga ataatgtac ttcccttgc
960
tgtaaacat gtcaagaaac agaaataaca accaaaaatg aaatattcag tttatcctta
1020
tgtgggccga tggcagctta tgtgaatcct catggatatg tgcagagac acttactgtg
1080
tataaggctt gcaacttgaa tctgataggc cggccttcta cagaacacag ctggttctc
1140
gggtatgcct ggactgttgc ccagtgtgag atctgtgcaa gccatattgg atggaagttt
1200
acggccacca aaaaagacat gtcacctcaa aaattttggg gcttaacgcg atctgctctg
1260
ttgcccacga tcccagacac tgaagatgaa ataagtccag acaaagtaat actttgcttg
1320
taaacagatg tgatagagat aaagttagtt atctaacaaa ttggttatat tctaagatct
1380
gctttggaaa ttattgcctc tgatacatc ctaagttaa acatacattaa tacctaagta
1440
aacataacat tacttggagg gttgcagttt ctaagtgaac ctgtatttga aacttttaag
1500
tatactttag gaaacaagca tgaacggcag tctagaatac cagaaacatc tacttgggta
1560
gcttggtgcc attatcctgt ggaatctgat atgtctggta gcatgtcatt gatgggacat
1620
gaagacatct ttggaaatga tgagattatt tcctgtatgc agtcatttct gaggccttct
1680
tgcatcatag ccctgtgac atttctctt agaaatatta cactctacaa aattgtttta
1740
tcaagggtcca aaattactat
1760

<210> 3628

<211> 440

<212> PRT

<213> Homo sapiens

<400> 3628

Gly	Glu	Gly	Asp	Gln	Gln	Asp	Ala	Ala	His	Asn	Met	Gly	Asn	His	Leu
1				5					10					15	
Pro	Leu	Leu	Pro	Ala	Glu	Ser	Glu	Glu	Glu	Asp	Glu	Met	Glu	Val	Glu
			20					25					30		
Asp	Gln	Asp	Ser	Lys	Glu	Ala	Lys	Lys	Pro	Asn	Ile	Ile	Asn	Phe	Asp
	35						40					45			
Thr	Ser	Leu	Pro	Thr	Ser	His	Thr	Tyr	Leu	Gly	Ala	Asp	Met	Glu	Glu
	50					55					60				
Phe	His	Gly	Arg	Thr	Leu	His	Asp	Asp	Asp	Ser	Cys	Gln	Val	Ile	Pro
65					70					75					80
Val	Leu	Pro	Gln	Val	Met	Met	Ile	Leu	Ile	Pro	Gly	Gln	Thr	Leu	Pro
			85						90					95	
Leu	Gln	Leu	Phe	His	Pro	Gln	Glu	Val	Ser	Met	Val	Arg	Asn	Leu	Ile
			100					105					110		
Gln	Lys	Asp	Arg	Thr	Phe	Ala	Val	Leu	Ala	Tyr	Ser	Asn	Val	Gln	Glu
		115					120					125			
Arg	Glu	Ala	Gln	Phe	Gly	Thr	Thr	Ala	Glu	Ile	Tyr	Ala	Tyr	Arg	Glu
	130					135					140				
Glu	Gln	Asp	Phe	Gly	Ile	Glu	Ile	Val	Lys	Val	Lys	Ala	Ile	Gly	Arg
145					150					155					160
Gln	Arg	Phe	Lys	Val	Leu	Glu	Leu	Arg	Thr	Gln	Ser	Asp	Gly	Ile	Gln
			165					170					175		
Gln	Ala	Lys	Val	Gln	Ile	Leu	Pro	Glu	Cys	Val	Leu	Pro	Ser	Thr	Met
		180					185					190			
Ser	Ala	Val	Gln	Leu	Glu	Ser	Leu	Asn	Lys	Cys	Gln	Ile	Phe	Pro	Ser
	195						200					205			
Lys	Pro	Val	Ser	Arg	Glu	Asp	Gln	Cys	Ser	Tyr	Lys	Trp	Trp	Gln	Lys
	210					215					220				
Tyr	Gln	Lys	Arg	Lys	Phe	His	Cys	Ala	Asn	Leu	Thr	Ser	Trp	Pro	Arg
225				230						235					240
Trp	Leu	Tyr	Ser	Leu	Tyr	Asp	Ala	Glu	Thr	Leu	Met	Asp	Arg	Ile	Lys
			245						250					255	
Lys	Gln	Leu	Arg	Glu	Trp	Asp	Glu	Asn	Leu	Lys	Asp	Asp	Ser	Leu	Pro
		260					265						270		
Ser	Asn	Pro	Ile	Asp	Phe	Ser	Tyr	Arg	Val	Ala	Ala	Cys	Leu	Pro	Ile
	275						280					285			
Asp	Asp	Val	Leu	Arg	Ile	Gln	Leu	Leu	Lys	Ile	Gly	Ser	Ala	Ile	Gln
	290					295					300				
Arg	Leu	Arg	Cys	Glu	Leu	Asp	Ile	Met	Asn	Lys	Cys	Thr	Ser	Leu	Cys
305					310					315					320
Cys	Lys	Gln	Cys	Gln	Glu	Thr	Glu	Ile	Thr	Thr	Lys	Asn	Glu	Ile	Phe
			325						330					335	
Ser	Leu	Ser	Leu	Cys	Gly	Pro	Met	Ala	Ala	Tyr	Val	Asn	Pro	His	Gly
		340						345					350		
Tyr	Val	His	Glu	Thr	Leu	Thr	Val	Tyr	Lys	Ala	Cys	Asn	Leu	Asn	Leu
	355						360					365			
Ile	Gly	Arg	Pro	Ser	Thr	Glu	His	Ser	Trp	Phe	Pro	Gly	Tyr	Ala	Trp
	370					375					380				
Thr	Val	Ala	Gln	Cys	Lys	Ile	Cys	Ala	Ser	His	Ile	Gly	Trp	Lys	Phe
385					390					395					400
Thr	Ala	Thr	Lys	Lys	Asp	Met	Ser	Pro	Gln	Lys	Phe	Trp	Gly	Leu	Thr

405 410 415
 Arg Ser Ala Leu Leu Pro Thr Ile Pro Asp Thr Glu Asp Glu Ile Ser
 420 425 430
 Pro Asp Lys Val Ile Leu Cys Leu
 435 440

<210> 3629

<211> 695

<212> DNA

<213> Homo sapiens

<400> 3629

acgcgtcccc tgtccggctt ggtatgggtc gcgctgctag cgctaggcca cgccttcctg
 60
 ttcaccgggg gcgtggtgag cgcctgggac caggtgtcct atttctctt cgtcatcttc
 120
 acggcgtatg ccatgctgcc cttgggcatg cgggacgccg ccgtcgcggg cctcgcctcc
 180
 tcaactctgc atctgctggt cctcgggctg tatcttgggc cacagccgga ctacaggcct
 240
 gcactgctgc cgcagttggc agcaaacgca gtgctgttcc tgtgcgggaa cgtggcagga
 300
 gtgtaccaca aggcgtgat ggagcgcgcc ctgcgggcca cgttccggga ggcactcagc
 360
 tccctgcact cacgccggcg gctggacacc gagaagaagc accaggtcag ccgggcctag
 420
 gaaggtcaga gcagcgtcc gagggaggag ttgcttagat tacataacgg ggctcctcca
 480
 caagttgagt gactctgggc aggtttcttg acctgtttct tcttttgtat aaaatgtggg
 540
 tattgcccat cttagaaggt tgtgaggctc aaacaaacca aagcttataa aaagcacttt
 600
 agagcattat gatattaagt gaactcccat tcagggtgtg atactgggag tttagtcact
 660
 aaagtgatc agtgtaggat ggagtgtgg ggccc
 695

<210> 3630

<211> 139

<212> PRT

<213> Homo sapiens

<400> 3630

Thr Arg Pro Leu Ser Gly Leu Val Trp Val Ala Leu Leu Ala Leu Gly
 1 5 10 15
 His Ala Phe Leu Phe Thr Gly Gly Val Val Ser Ala Trp Asp Gln Val
 20 25 30
 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu
 35 40 45
 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His
 50 55 60
 Leu Leu Val Leu Gly Leu Tyr Leu Gly Pro Gln Pro Asp Ser Arg Pro
 65 70 75 80
 Ala Leu Leu Pro Gln Leu Ala Ala Asn Ala Val Leu Phe Leu Cys Gly

```
<210> 3631
<211> 864
<212> DNA
<213> Homo sapiens
```

```
<210> 3632
<211> 222
<212> PRT
<213> Homo sapiens
```

2788

20 25 30
 Ile Thr Thr Glu Gly Lys Tyr Trp Lys Ser Arg Ile Glu Ile Val Ile
 35 40 45
 Arg Glu Tyr His Lys Trp Arg Thr Tyr Phe Lys Lys Arg Leu Gln Gln
 50 55 60
 His Lys Asp Glu Asp Leu Ser Ser Leu Val Gln Asp Asp Asp Met Leu
 65 70 75
 Tyr Trp His Lys His Gly Asp Gly Trp Lys Thr Pro Val Pro Met Glu
 85 90 95
 Glu Asp Pro Leu Leu Asp Thr Asp Met Leu Met Ser Glu Phe Ser Asp
 100 105 110
 Thr Leu Phe Ser Thr Leu Ser Ser His Gln Pro Val Ala Trp Pro Asn
 115 120 125
 Pro Arg Glu Ile Ala His Leu Gly Asn Ala Asp Met Ile Gln Pro Gly
 130 135 140
 Leu Ile Pro Leu Gln Pro Asn Leu Asp Phe Met Asp Thr Phe Glu Pro
 145 150 155 160
 Phe Gln Asp Leu Phe Ser Ser Ser Arg Ser Ile Phe Gly Ser Met Leu
 165 170 175
 Pro Ala Ser Ala Ser Ala Pro Val Pro Asp Pro Asn Asn Pro Pro Ala
 180 185 190
 Gln Glu Ser Ile Leu Pro Thr Thr Ala Leu Pro Thr Val Ser Leu Pro
 195 200 205
 Asp Ser Leu Ile Ala Pro Pro Thr Ala Pro Ser Leu Ala Arg
 210 215 220

<210> 3633

<211> 1570

<212> DNA

<213> Homo sapiens

<400> 3633

ggatccatac aactgctccg cctggtggaa tctgagagga agtcacctca tgtgtcacca
 60
 gcagaagggc tgaagtgaca ggatgttcat tgacctgtca gtggatctga aagttctcta
 120
 aggagagcct gggcaagcat tcttaggttg atgctggggc ccagagtagc agtgagcatc
 180
 ctgtgtgaag atggcatttc tcaactgatta ttggaaaagc acaagagcca cgtgctggag
 240
 ccattgtcca gccttgcctt ggaggagcag tgtctggctt tgtccctaga ttggtccact
 300
 gggaaaactg gaagggccgg ggaccagccc ttgaagatca tcagcagtga ctccacaggg
 360
 cagctccacc tctgatggg gaatgagacg aggccaggc tgcagaaagt ggctcatgg
 420
 caggcacatc aattcgaggc ctggattgct gctttcaatt actggcatcc agaaattgtg
 480
 tattcagggg gcgacgatgg ccttctgagg ggctgggaca ccagggtacc cggcaaattt
 540
 ctcttcacca gcnaaaagac acaccatnng ggtgtgtgca gcatccagag cagccctcat
 600
 cgggagcaca tcctggccac ggggaagctat gatgaacaca tcctactgtg ggacacacga
 660

aacatgaagc agccgttggc agatacgctt gtgcagggtg gggatatggag aatcaagtgg
 720
 caccctttcc accaccacct gctcctggcc gcctgcatgc acagtggctt taagatcctc
 780
 aactgccaaa aggcaatgga ggagaggcag gaggcgacgg tcctgacatc tcacacattg
 840
 cccgactcgc tgggtgtatgg agccgactgg tcctggctgc tcttccttcc tctgcagcgg
 900
 gccccctcgt ggtcctttcc tagcaacctt ggaaccaaga cggcagacct gaaggggtgca
 960
 agcgagtgtg caacaccctg tcatgaatgc agagaggata acgatgggga gggccatgcc
 1020
 agaccccaga gtggaatgaa gccactcaca gagggcatga ggaagaatgg cacctggctg
 1080
 caggctacag cagccaccac acgtgactgt ggcgtgaacc cagaagaagc agactcagcc
 1140
 ttcagcctcc tggccacctg ctccttctat gaccatgcgc tccacctctg ggagtgggag
 1200
 gggaactgag cttgaaatca tgaagcccct tcccacaagg aaaccaggag ggagactgcg
 1260
 agtgagtgcc cgggaccacc tcacagaga tgcttactgc agccctgcag gtgcctgtgc
 1320
 actgatggaa tccacagtgt agtcagaaaa gctgttgact tctcttaaact cagcttcctt
 1380
 gctgggcccc tgaaagtgga ctgggtgatt ctgtctggca gagagtgggg aaaagacgcg
 1440
 gtttcacagt tgcagatttg ttaagtttct caggcagatt ttgactttca gcctttcata
 1500
 cttgtttaag caactatttg tattaatatga agttttttga aaaaaaaaaa aaaaaaaaaa
 1560
 aaaaaaaaaa
 1570

<210> 3634

<211> 277

<212> PRT

<213> Homo sapiens

<400> 3634

Met	Val	Asn	Glu	Thr	Arg	Pro	Arg	Leu	Gln	Lys	Val	Ala	Ser	Trp	Gln
1				5				10						15	
Ala	His	Gln	Phe	Glu	Ala	Trp	Ile	Ala	Ala	Phe	Asn	Tyr	Trp	His	Pro
		20						25					30		
Glu	Ile	Val	Tyr	Ser	Gly	Gly	Asp	Asp	Gly	Leu	Leu	Arg	Gly	Trp	Asp
		35					40					45			
Thr	Arg	Val	Pro	Gly	Lys	Phe	Leu	Phe	Thr	Ser	Xaa	Lys	Thr	His	His
		50				55					60				
Xaa	Gly	Val	Cys	Ser	Ile	Gln	Ser	Ser	Pro	His	Arg	Glu	His	Ile	Leu
65					70					75				80	
Ala	Thr	Gly	Ser	Tyr	Asp	Glu	His	Ile	Leu	Leu	Trp	Asp	Thr	Arg	Asn
			85					90					95		
Met	Lys	Gln	Pro	Leu	Ala	Asp	Thr	Pro	Val	Gln	Gly	Gly	Val	Trp	Arg
			100					105					110		
Ile	Lys	Trp	His	Pro	Phe	His	His	His	Leu	Leu	Leu	Ala	Ala	Cys	Met

115	120	125
His Ser Gly Phe Lys Ile Leu Asn Cys Gln Lys Ala Met Glu Glu Arg		
130	135	140
Gln Glu Ala Thr Val Leu Thr Ser His Thr Leu Pro Asp Ser Leu Val		
145	150	155
Tyr Gly Ala Asp Trp Ser Trp Leu Leu Phe Arg Ser Leu Gln Arg Ala		
165	170	175
Pro Ser Trp Ser Phe Pro Ser Asn Leu Gly Thr Lys Thr Ala Asp Leu		
180	185	190
Lys Gly Ala Ser Glu Leu Pro Thr Pro Cys His Glu Cys Arg Glu Asp		
195	200	205
Asn Asp Gly Glu Gly His Ala Arg Pro Gln Ser Gly Met Lys Pro Leu		
210	215	220
Thr Glu Gly Met Arg Lys Asn Gly Thr Trp Leu Gln Ala Thr Ala Ala		
225	230	235
Thr Thr Arg Asp Cys Gly Val Asn Pro Glu Glu Ala Asp Ser Ala Phe		
245	250	255
Ser Leu Leu Ala Thr Cys Ser Phe Tyr Asp His Ala Leu His Leu Trp		
260	265	270
Glu Trp Glu Gly Asn		
275		

<210> 3635

<211> 835

<212> DNA

<213> Homo sapiens

<400> 3635

```

ngaattcaac ttcagcaaca gcagcaacag tcttgccaac acctgggatt actaactcct
60
gttgaggttg gagagcagct ttctgagggga gactatgcac gggttacagca agtggatcct
120
gttttactta aagatgaacc ccagcagact gctgctcaga tgggttgtgc gccaatccag
180
cctctggcga tgcctcaagc tttgcctctg gcggcaggtc ccttgctcctc aggggtccatc
240
gcaaactctta cagaactgca aggagtgata gttggacagc cagtactggg ccaagcacag
300
ttggcagggc tggggcaagg aattctgaca gaaacacaac aagggttaat ggtagccagc
360
cctgctcaga ccctcaatga cacgctggat gacatcatgg cagcagtcag tggaagagca
420
tctgcaatgt caaacactcc taccacagc attgctgcat ccatttccca acctcagact
480
ccaactccaa gtcttatcat ctctccttca gccatgcttc ctatctaccc tgccattgat
540
attgtgcac agactgagag taatcatgac acggcgctaa cacttgcttg tgctgggtggc
600
cacgaggaac tggatcaaac actgctagag agaggagcta gtatagagca ccgagacaag
660
aaaggtttta ctccactcat cttggctgcc acagctgggc atgttggtgt tgtggaaata
720
tgctgggaca atggtgcaga cattgaagcc cagtctgaaa gaaccaagga cacaccactc
780

```

tccttggtt gttctggggg aagacaggag gtggtggagc tattgttagc tcgag
835

<210> 3636
<211> 278
<212> PRT
<213> Homo sapiens

<400> 3636
Xaa Ile Gln Leu Gln Gln Gln Gln Gln Ser Cys Gln His Leu Gly
1 5 10 15
Leu Leu Thr Pro Val Gly Val Gly Glu Gln Leu Ser Glu Gly Asp Tyr
20 25 30
Ala Arg Leu Gln Gln Val Asp Pro Val Leu Leu Lys Asp Glu Pro Gln
35 40 45
Gln Thr Ala Ala Gly Met Gly Cys Ala Pro Ile Gln Pro Leu Ala Met
50 55 60
Pro Gln Ala Leu Pro Leu Ala Ala Gly Pro Leu Pro Pro Gly Ser Ile
65 70 75 80
Ala Asn Leu Thr Glu Leu Gln Gly Val Ile Val Gly Gln Pro Val Leu
85 90 95
Gly Gln Ala Gln Leu Ala Gly Leu Gly Gln Gly Ile Leu Thr Glu Thr
100 105 110
Gln Gln Gly Leu Met Val Ala Ser Pro Ala Gln Thr Leu Asn Asp Thr
115 120 125
Leu Asp Asp Ile Met Ala Ala Val Ser Gly Arg Ala Ser Ala Met Ser
130 135 140
Asn Thr Pro Thr His Ser Ile Ala Ala Ser Ile Ser Gln Pro Gln Thr
145 150 155 160
Pro Thr Pro Ser Pro Ile Ile Ser Pro Ser Ala Met Leu Pro Ile Tyr
165 170 175
Pro Ala Ile Asp Ile Asp Ala Gln Thr Glu Ser Asn His Asp Thr Ala
180 185 190
Leu Thr Leu Ala Cys Ala Gly Gly His Glu Glu Leu Val Gln Thr Leu
195 200 205
Leu Glu Arg Gly Ala Ser Ile Glu His Arg Asp Lys Lys Gly Phe Thr
210 215 220
Pro Leu Ile Leu Ala Ala Thr Ala Gly His Val Gly Val Val Glu Ile
225 230 235 240
Leu Leu Asp Asn Gly Ala Asp Ile Glu Ala Gln Ser Glu Arg Thr Lys
245 250 255
Asp Thr Pro Leu Ser Leu Ala Cys Ser Gly Gly Arg Gln Glu Val Val
260 265 270
Glu Leu Leu Leu Ala Arg
275

<210> 3637
<211> 2128
<212> DNA
<213> Homo sapiens

<400> 3637
nacggtgcg atccccggcg cccgcgcgcg cccatagcgc tccgccagag ctgccgcgcg
60

ggactcgccg ggagtggggg tctccgctgg tgccagcccg cttctggaga ccctccgcct
120
cctgccaacc cctgctcttc caggctcggc cccgggggttc tgcggtctgtt agggacagag
180
gcaaagaagg gcaggacggt ccggtttccc gtggatgttc ccgcccgaga aagacagcaa
240
gttgtgtgtg cccccgggac gcgggagggg aggtagccgc cggccgccag ccatggacca
300
tcattcttag tgcagaggat ggaaagtga tgcccagtaa gactgaagat ccattctgca
360
ttacgggaact gtggattatc tgtgggtccc tgggtgatttc acaccttcac tcaactctgc
420
agtccttgaa cacttacttg gggtcctcat tgccctatct ggtgaaagat ggcattccagc
480
ctgacttgta ctggagtaat ctgggctttg ctgtcttttc tttgtgctgc cacctcctgc
540
gtgggggttct ttatgcctta ctggctctgg ggatcacagc tgggcaagcc tgtgtccttc
600
ggtaccttcc ggaggtgctc atatcctgtg catgatgaga gtcggcagat gatggtgatg
660
gtggaggaat gtgggcgcta tgcctccttc cagggcattc ccagcgcaga atggaggatc
720
tgcaccatag tgaccggcct gggttgtggc ctccctcctc tgggtggcgt cactgccttc
780
atgggttgct gtgtttccga cctcatctcc aggacagtgg gaagagtggc tggaggaatt
840
cagtttcttg ggggcttggt gattggtgct ggctgtgccc tctacctctt gggctgggac
900
agtgaggaag tccggcagac ttgtggctac acttctggcc agtttgacct ggggaagtgt
960
gaaatcggtc gggcctacta ctgcacggga gcaggtgcca ctgccgccat gctgctgtgc
1020
acgtggctgg cttgcttttc gggcaagaaa cagaagcact acccatactg agatggagct
1080
accaagagca gacagaggag aagatgggcc aaaggggctt ggagaggtca aaacatccac
1140
ctaccttcaa aaggtgggat agtagttcta atccaatata atgctaataa aatgaaaccc
1200
gataaaatca ggaacatgat ataggaagga aggattgtag gagatttgtg ggggaaaaaa
1260
aaggagagta tagaatgatg gagaaaaatg gaccaaaggc taaaaatatt gcagggcac
1320
gggtgtttct attccacaga gtattgttaa tgtacaacac acacacacac acacacacac
1380
acacacacac acacacacaa caaatctaca tatacaaaca agggtttggg ttttagtttt
1440
ttttttttaa ggtgaggact cagaaaatca aagggttagt agaaacagtg ttatgttggg
1500
aagcaaggta cccccaaga tgttcctgt aggtcacggc actcccaaaa gcacacaagc
1560
acatacagac atatgcatcc ccacacacgc ctatgcacaa acgtggatta tcgcacagac
1620
tgggagggtt agtgggtgcat ttctcctctg ttttcttttt aatatacatt taaaatacag
1680

tattatcact ttataaaaca tacattaagc ctaataaatg gaccaataag ccaaactatc
 1740
 agtattttgt atatcctgca taaactctaa tttagttcct caacatattt tcagtgttta
 1800
 tgcagacctt tagagttaag cctttgtatt tccatgttat tccacaatat gcaatatttc
 1860
 tctgagtagc ttctgctatg atattcttat gaagaaaagg ggcaactttc tgtccactat
 1920
 aggagagaat tcagccgaag atatgagagt aatgagagac attttccagt cattggatcg
 1980
 tgttttcttt tgtccattat tgtactgtgc tgtaccacat ttatttctat attcattttg
 2040
 taaaaaattt aaaagtgcta ttttgtttgt atttgaaaat ctctgtgaat aaattctctc
 2100
 tttgatcaat aaaaaaaaaa aaaaaaaaa
 2128

<210> 3638

<211> 200

<212> PRT

<213> Homo sapiens

<400> 3638

Met	Ala	Ser	Ser	Leu	Thr	Cys	Thr	Gly	Val	Ile	Trp	Ala	Leu	Leu	Ser
1				5				10					15		
Phe	Leu	Cys	Ala	Ala	Thr	Ser	Cys	Val	Gly	Phe	Phe	Met	Pro	Tyr	Trp
			20					25				30			
Leu	Trp	Gly	Ser	Gln	Leu	Gly	Lys	Pro	Val	Ser	Phe	Gly	Thr	Phe	Arg
		35					40				45				
Arg	Cys	Ser	Tyr	Pro	Val	His	Asp	Glu	Ser	Arg	Gln	Met	Met	Val	Met
	50					55				60					
Val	Glu	Glu	Cys	Gly	Arg	Tyr	Ala	Ser	Phe	Gln	Gly	Ile	Pro	Ser	Ala
65					70					75				80	
Glu	Trp	Arg	Ile	Cys	Thr	Ile	Val	Thr	Gly	Leu	Gly	Cys	Gly	Leu	Leu
			85						90					95	
Leu	Leu	Val	Ala	Leu	Thr	Ala	Leu	Met	Gly	Cys	Cys	Val	Ser	Asp	Leu
			100					105					110		
Ile	Ser	Arg	Thr	Val	Gly	Arg	Val	Ala	Gly	Gly	Ile	Gln	Phe	Leu	Gly
		115					120					125			
Gly	Leu	Leu	Ile	Gly	Ala	Gly	Cys	Ala	Leu	Tyr	Pro	Leu	Gly	Trp	Asp
	130					135					140				
Ser	Glu	Glu	Val	Arg	Gln	Thr	Cys	Gly	Tyr	Thr	Ser	Gly	Gln	Phe	Asp
145					150					155				160	
Leu	Gly	Lys	Cys	Glu	Ile	Gly	Trp	Ala	Tyr	Tyr	Cys	Thr	Gly	Ala	Gly
			165						170					175	
Ala	Thr	Ala	Ala	Met	Leu	Leu	Cys	Thr	Trp	Leu	Ala	Cys	Phe	Ser	Gly
			180					185					190		
Lys	Lys	Gln	Lys	His	Tyr	Pro	Tyr								
		195					200								

<210> 3639

<211> 726

<212> DNA

<213> Homo sapiens

<400> 3639

attcggcacg agattctgga caatttttct ttatacttta atgagtgtgc gtttctctta
 60
 aagaataagc tttaatatat atacacccat aataccttca aatacatttt taagcactta
 120
 aagactaaca gtgggttatct ctcagcggga ttataaatgt tttgggtttt tttttttttt
 180
 tgtacatttt agtatttttt gaaatttttt taataagcgt gtattacata cagtaaacia
 240
 aagcacatta atgtaggcag attatcaatg ttatgcattt cactgattgc atatctcttt
 300
 ttttatcaat ggtgaacatt gcaaatgatt gatacgtttt tcttaggaag tggcattgcc
 360
 acaaatgggt tttccaacac cagcagggcc tgagagtgtc atcaccatac actcttgccg
 420
 gcaataaaaa aatttcacct tttaatggat ttaaaaggga aaagtggggg tgttgggttc
 480
 tccagggcat ttctttcatt atgagtgaca tttttctgaa aggaacgtga tctcgttttc
 540
 tagccgcatt aagcatttct ccaacaagac ccactgtacc agtcctggga tctccacacc
 600
 tgtgccttct cctgtctctt tctaggtcct gattctcacc tctgcctgtg taataaccct
 660
 gtcattttct ccttatccca gttccatgtc tgtgacaagc ttggaggccg agttgcaagc
 720
 taagat
 726

<210> 3640

<211> 102

<212> PRT

<213> Homo sapiens

<400> 3640

Met	Leu	His	Ala	Ala	Arg	Lys	Arg	Asp	His	Val	Pro	Phe	Arg	Lys	Met
1				5					10					15	
Ser	Leu	Ile	Met	Lys	Glu	Met	Pro	Trp	Arg	Thr	Gln	His	Pro	Asn	Phe
			20					25					30		
Ser	Leu	Leu	Asn	Pro	Leu	Lys	Gly	Glu	Ile	Phe	Leu	Leu	Pro	Ala	Arg
			35				40						45		
Val	Tyr	Gly	Asp	Asp	Thr	Leu	Arg	Pro	Cys	Trp	Cys	Trp	Lys	Asn	His
			50			55					60				
Leu	Trp	Gln	Cys	His	Phe	Leu	Arg	Lys	Thr	Tyr	Gln	Ser	Phe	Ala	Met
65					70					75				80	
Phe	Thr	Ile	Asp	Lys	Lys	Arg	Asp	Met	Gln	Ser	Val	Lys	Cys	Ile	Thr
				85				90						95	
Leu	Ile	Ile	Cys	Leu	His										
				100											

<210> 3641

<211> 455

<212> DNA

<213> Homo sapiens

<400> 3641
 gtgcaccagc tatggcgcag ccgctcgtcc tcgccccttc ccgccgaccg ggccaactgc
 60
 cgcgggggcg ggcgggcggt gcggctcccg gaggcgagga aatgtcgcag agccccgagg
 120
 agtccccgag cagtcacgcg agccgggacc ttgccccgct ggaacgcaga agcgggccgtg
 180
 gagctcgaga cgctcgcgcg ctcacctcct gggccccctgt gcgtggggaa gtcaggaaga
 240
 agacgccgag tgaggtcacg gtgcccacga ggggtggattc ccctcggcct gaccacgcca
 300
 ggaggtggcc gaaggggaaga ggggtggggca ggggctgctc tgcacctctc agcagagcgg
 360
 catccctgca ggtgtttgct ctggcgagga gaagccccag agagcagttc gggactgtgc
 420
 ggattggctt tagggagcca gcttttaaaa cgcgt
 455

<210> 3642

<211> 148

<212> PRT

<213> Homo sapiens

<400> 3642
 Met Ala Gln Pro Leu Val Leu Ala Pro Ser Arg Arg Pro Gly Gln Leu
 1 5 10 15
 Pro Arg Gly Arg Ala Gly Gly Ala Ala Pro Gly Gly Glu Glu Met Ser
 20 25 30
 Gln Ser Pro Glu Glu Ser Arg Ser Ser His Ala Ser Arg Asp Leu Ala
 35 40 45
 Pro Leu Glu Arg Arg Ser Gly Arg Gly Ala Arg Asp Ala Arg Ala Leu
 50 55 60
 Thr Ser Trp Ala Pro Val Arg Gly Glu Val Arg Lys Lys Thr Pro Ser
 65 70 75 80
 Glu Val Thr Val Pro Thr Arg Val Asp Ser Pro Arg Pro Asp His Ala
 85 90 95
 Arg Arg Trp Pro Lys Gly Arg Gly Trp Gly Arg Gly Cys Ser Ala Pro
 100 105 110
 Ser Ser Arg Ala Ala Ser Leu Gln Val Phe Ala Leu Ala Arg Arg Ser
 115 120 125
 Pro Arg Glu Gln Phe Gly Thr Val Arg Ile Gly Phe Arg Glu Pro Ala
 130 135 140
 Phe Lys Thr Arg
 145

<210> 3643

<211> 2243

<212> DNA

<213> Homo sapiens

<400> 3643
 nngggtatag agtctccctg gcccataata ggtctccact attggctggt ggagcgcttc
 60

ttcaagatct tcccactgct gggtttgcac gaggagggat taagaaagtt ctcgaggtac
120
ctttgcaagc aggtggccag taaagctgag gagaatctgc tcatgggtgct ggggacagac
180
atgagtgatc ggagagctgc agtcattctt gcagatacac ttactcttct gtttgaaggg
240
attgcccgc tttgtggagac ccaccagcca atagtggaga cctattatgg gccagggaga
300
ctctataccc tgatcaaata tctgcagggtg gaatgtgaca gacagggtgga gaagggtgga
360
gacaagttca tcaagcaaag ggactaccac cagcagttcc ggcatgttca gaacaacctg
420
atgagaaatt ctacaacaga aaaaatcgaa ccaagagaaac tggaccccat cctgactgag
480
gtcaccctga tgaatgcccg cagtggagcta tacttacgct tcctcaagaa gaggattagc
540
tctgattttg aggtgggaga ctccatggcc tcagaggaag taaagcaaga gcaccagaag
600
tgtctggaca aactcctcaa taactgcctt ttgagctgta ccatgcagga gctaattggc
660
ttatatgtta ccatggagga gtacttcatg agggagactg tcaataaggc tgtggctctg
720
gacacctatg agaagggcca gctgacatcc agcatgggtg atgatgtctt ctacattgtt
780
aagaagtgca ttgggcgggc tctgtccagc tccagcattg actgtctctg tgccatgatc
840
aacctcgcca ccacagagct ggagtctgac ttcagggatg ttctgtgtaa taagctgcg
900
atgggctttc ctgccaccac ctccaggac atccagcgcg gggtgacaag tgccgtgaac
960
atcatgcaca gcagcctcca gcaaggcaaa tttgacacaa aaggcatcga gactactgac
1020
gaggcgaaga tgccttctc ggtgactctg aacaacgtgg aagtctgcag tgaaaacatc
1080
tccactctga agaagacact ggagagtgc tgcaccaagc tcttcagcca gggcattgga
1140
ggggagcagg cccaggccaa gtttgacagc tgcctttctg acttgccgc cgtgtccaac
1200
aaattccgag acctcttgca ggaagggtg acggagctca acagcacagc catcaagcca
1260
cagggtgcagc cttggatcaa cagctttttc tccgtctccc acaacatcga ggaggaagaa
1320
ttcaatgact atgaggccaa cgacccttgg gtacaacagt tcatccttaa cctggagcag
1380
caaattggcag agttcaaggc cagcctgtcc ccggctcatc acgacagcct aaccggcctc
1440
atgactagcc ttgttgccgt cgagttggag aaagtgggtg tgaaatccac cttaaacgg
1500
ctgggtggtc tgcagtttga caaggagctg aggtcactca ttgcctacct taccacgggtg
1560
accacctgga ccatccgaga caagtttgcc cggctctccc agatggccac catcctcaat
1620
ctggagcggg tgaccgagat cctcgattac tggggaccca attccggccc attgacgtgg
1680

cgctcaccc ctgctgaagt gcgccaggtg ctggccctgc ggatagactt ccgcagtgaa
 1740
 gatataaaga ggctgcgcct gtagctgcct ggatgagcac acctggctca tcacacttgc
 1800
 aggctgttc cctaaggggc cccagccaag gagctgagcg aggctgtctg gcttggggga
 1860
 gatctgacag cccagacctt tctacggctg gcagcagaga aacaaagtct ggacccactc
 1920
 catgctctgc cctcagacct ggccaggtga tgctctgggg gcagcatctc cccaccgaga
 1980
 gaagcgggct cctaattgagg tgggaaagcc acggcaggca gcgagcagcc caggccagct
 2040
 ttctgcatgg atggtcagtc tcttgccctc aaacactaca gcaaacaagc taccctgccc
 2100
 agtcctagac aacttgggta catctgggga cctagcagtt aggcttgact ttgaggagag
 2160
 gctgtgatgt ttatgatccc tgaataaagc tactccttgg agaaaaaaaa aaaaaaaaaa
 2220
 aaaaaaaaaa aaaaaaaaaa aaa
 2243

<210> 3644

<211> 560

<212> PRT

<213> Homo sapiens

<400> 3644

Gly	Leu	His	Glu	Glu	Gly	Leu	Arg	Lys	Phe	Ser	Glu	Tyr	Leu	Cys	Lys
1			5						10					15	
Gln	Val	Ala	Ser	Lys	Ala	Glu	Glu	Asn	Leu	Leu	Met	Val	Leu	Gly	Thr
			20					25					30		
Asp	Met	Ser	Asp	Arg	Arg	Ala	Ala	Val	Ile	Phe	Ala	Asp	Thr	Leu	Thr
		35				40					45				
Leu	Leu	Phe	Glu	Gly	Ile	Ala	Arg	Ile	Val	Glu	Thr	His	Gln	Pro	Ile
	50				55					60					
Val	Glu	Thr	Tyr	Tyr	Gly	Pro	Gly	Arg	Leu	Tyr	Thr	Leu	Ile	Lys	Tyr
65					70				75					80	
Leu	Gln	Val	Glu	Cys	Asp	Arg	Gln	Val	Glu	Lys	Val	Val	Asp	Lys	Phe
			85					90					95		
Ile	Lys	Gln	Arg	Asp	Tyr	His	Gln	Gln	Phe	Arg	His	Val	Gln	Asn	Asn
		100					105						110		
Leu	Met	Arg	Asn	Ser	Thr	Thr	Glu	Lys	Ile	Glu	Pro	Arg	Glu	Leu	Asp
	115					120						125			
Pro	Ile	Leu	Thr	Glu	Val	Thr	Leu	Met	Asn	Ala	Arg	Ser	Glu	Leu	Tyr
	130				135						140				
Leu	Arg	Phe	Leu	Lys	Lys	Arg	Ile	Ser	Ser	Asp	Phe	Glu	Val	Gly	Asp
145				150					155					160	
Ser	Met	Ala	Ser	Glu	Val	Lys	Gln	Glu	His	Gln	Lys	Cys	Leu	Asp	
			165				170					175			
Lys	Leu	Leu	Asn	Cys	Leu	Leu	Ser	Cys	Thr	Met	Gln	Glu	Leu	Ile	
	180					185					190				
Gly	Leu	Tyr	Val	Thr	Met	Glu	Glu	Tyr	Phe	Met	Arg	Glu	Thr	Val	Asn
	195					200					205				
Lys	Ala	Val	Ala	Leu	Asp	Thr	Tyr	Glu	Lys	Gly	Gln	Leu	Thr	Ser	Ser

210	215	220
Met Val Asp Asp Val Phe Tyr Ile Val Lys Lys Cys Ile Gly Arg Ala		
225	230	235
Leu Ser Ser Ser Ser Ile Asp Cys Leu Cys Ala Met Ile Asn Leu Ala		240
	245	250
Thr Thr Glu Leu Glu Ser Asp Phe Arg Asp Val Leu Cys Asn Lys Leu		255
	260	265
Arg Met Gly Phe Pro Ala Thr Thr Phe Gln Asp Ile Gln Arg Gly Val		270
	275	280
Thr Ser Ala Val Asn Ile Met His Ser Ser Leu Gln Gln Gly Lys Phe		285
	290	295
Asp Thr Lys Gly Ile Glu Ser Thr Asp Glu Ala Lys Met Ser Phe Leu		300
305	310	315
Val Thr Leu Asn Asn Val Glu Val Cys Ser Glu Asn Ile Ser Thr Leu		320
	325	330
Lys Lys Thr Leu Glu Ser Asp Cys Thr Lys Leu Phe Ser Gln Gly Ile		335
	340	345
Gly Gly Glu Gln Ala Gln Ala Lys Phe Asp Ser Cys Leu Ser Asp Leu		350
	355	360
Ala Ala Val Ser Asn Lys Phe Arg Asp Leu Leu Gln Glu Gly Leu Thr		365
	370	375
Glu Leu Asn Ser Thr Ala Ile Lys Pro Gln Val Gln Pro Trp Ile Asn		380
385	390	395
Ser Phe Phe Ser Val Ser His Asn Ile Glu Glu Glu Glu Phe Asn Asp		400
	405	410
Tyr Glu Ala Asn Asp Pro Trp Val Gln Gln Phe Ile Leu Asn Leu Glu		415
	420	425
Gln Gln Met Ala Glu Phe Lys Ala Ser Leu Ser Pro Val Ile Tyr Asp		430
	435	440
Ser Leu Thr Gly Leu Met Thr Ser Leu Val Ala Val Glu Leu Glu Lys		445
	450	455
Val Val Leu Lys Ser Thr Phe Asn Arg Leu Gly Gly Leu Gln Phe Asp		460
465	470	475
Lys Glu Leu Arg Ser Leu Ile Ala Tyr Leu Thr Thr Val Thr Thr Trp		480
	485	490
Thr Ile Arg Asp Lys Phe Ala Arg Leu Ser Gln Met Ala Thr Ile Leu		495
	500	505
Asn Leu Glu Arg Val Thr Glu Ile Leu Asp Tyr Trp Gly Pro Asn Ser		510
	515	520
Gly Pro Leu Thr Trp Arg Leu Thr Pro Ala Glu Val Arg Gln Val Leu		525
	530	535
Ala Leu Arg Ile Asp Phe Arg Ser Glu Asp Ile Lys Arg Leu Arg Leu		540
545	550	555
		560

<210> 3645

<211> 823

<212> DNA

<213> Homo sapiens

<400> 3645

acgcgtacat gggcaggtgg tagcggttat agtgcaggta gtcaagagtg cttctctcca
60
ccagggtttt gtagatggat tcctcaaaaa ctcttttgag gtattgcctg ggcttctcag
120

tcgggttgat ttcctcatct tctatttgat gggctaactg ctctatggaa ggaagatctt
 180
 cctcctcctt ggaggctaag atttggcgta actctttcct gagatcaata aaacgatcgt
 240
 ggaacagggc caggcaccac ggctcgggtga agtagctata gagatctgtg atcagggtttt
 300
 catcgtaccg agcacacagg ttgttgagga gttgctcgtg ctggccaaac aagcggatgt
 360
 agttggaggc ggggaagggc tccctagaaa ggcacgtgat ggtttccacc attttatact
 420
 tgттаататg aattcggaag taagtcccat ttttcgcact gccggttact agttctaaac
 480
 cataattagg ctgggccatt tgtacctcca agggagttgg aatggcaggc ttggcaatat
 540
 gcagataatg gtaagaccca ggaagaatgc ccccttgaat cttggctccc ttgtacatgg
 600
 ggatgagccg gtcaagatta gctgggtggct cggtcacagg ctcaagggtt ggatcaaaga
 660
 gatgtagcat agctgctgcc agctgaaagc caatttcttt ggaactgaag ttgctggtgg
 720
 gccattcat ttgagtagta tctattggag aatttggtga gggagccagc agctctgatg
 780
 gctatgtcgt tgggtgtggaa gttggtatca atcacaagtc gac
 823

<210> 3646

<211> 243

<212> PRT

<213> Homo sapiens

<400> 3646

Met	Asn	Gly	Pro	Thr	Ser	Asn	Phe	Ser	Ser	Lys	Glu	Ile	Gly	Phe	Gln
1				5					10					15	
Leu	Ala	Ala	Ala	Met	Leu	His	Leu	Phe	Asp	Pro	Thr	Leu	Glu	Pro	Val
			20					25					30		
Thr	Glu	Pro	Pro	Ala	Asn	Leu	Asp	Arg	Leu	Ile	Pro	Met	Tyr	Lys	Gly
	35					40					45				
Ala	Lys	Ile	Gln	Gly	Gly	Ile	Leu	Pro	Gly	Ser	Tyr	His	Tyr	Leu	His
	50					55					60				
Ile	Ala	Lys	Pro	Ala	Ile	Pro	Thr	Pro	Leu	Glu	Val	Gln	Met	Ala	Gln
65					70					75					80
Pro	Asn	Tyr	Gly	Leu	Glu	Leu	Val	Thr	Gly	Ser	Ala	Lys	Asn	Gly	Thr
			85						90					95	
Tyr	Phe	Arg	Ile	His	Ile	Asn	Lys	Tyr	Lys	Met	Val	Glu	Thr	Ile	Thr
			100					105					110		
Cys	Leu	Ser	Arg	Glu	Pro	Phe	Pro	Ala	Ser	Asn	Tyr	Ile	Arg	Leu	Phe
		115					120					125			
Gly	Gln	His	Glu	Gln	Leu	Leu	Asn	Asn	Leu	Cys	Ala	Arg	Tyr	Asp	Glu
	130					135					140				
Asn	Leu	Ile	Thr	Asp	Leu	Tyr	Ser	Tyr	Phe	Thr	Glu	Pro	Trp	Cys	Leu
145					150					155					160
Ala	Leu	Phe	His	Asp	Arg	Phe	Ile	Asp	Leu	Arg	Lys	Glu	Leu	Arg	Gln
			165					170					175		
Ile	Leu	Ala	Ser	Lys	Glu	Glu	Glu	Asp	Leu	Pro	Ser	Ile	Glu	Gln	Leu

180 185 190
 Ala His Gln Ile Glu Asp Glu Glu Ile Asn Pro Thr Glu Lys Pro Arg
 195 200 205
 Gln Tyr Leu Lys Arg Val Phe Glu Glu Ser Ile Tyr Lys Thr Leu Val
 210 215 220
 Glu Arg Ser Thr Leu Asp Tyr Leu His Tyr Asn Arg Tyr His Leu Pro
 225 230 235 240
 Met Tyr Ala

<210> 3647
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 3647
 acgcgtcggg cgagcgccgc gcctacgggc ccctttttct gcgcgaccgc gtggctgtgg
 60
 gcgcggatgc ctttgagcgc ggtgacttct cactgcgtat cgagccgctg gaggtcgccg
 120
 acgagggcac ctactcctgc cacctgcacc accattactg tggcctgcac gaacgcgcg
 180
 tcttccacct gacggtcgcc gaacccacg cggagccgcc cccccggggc tctccgggca
 240
 acggctccag ccacagcggc gccccaggcc caggtgaagg aggcctccct gggacccggg
 300
 aaggcgggag cccacccac cgggggttgc tctgcgccg ctgtcccttg cccgaggccc
 360
 gcggatccca gcgggnnggc cgtggcccgg gtcggggcgc aggtcttgct ggtacctgac
 420
 gccgtccga cccgcgttc cccgcagacc ccacactggc gcgcggccac aacgtcatca
 480
 atgtcatcgt ccccgagagc cgagcccact tcttccagca gctgggctac gtgctggcca
 540
 cgctgctgct cttcatcctg ctactggtca ctgtcctcct ggcc
 584

<210> 3648
 <211> 63
 <212> PRT
 <213> Homo sapiens

<400> 3648
 Thr Arg Arg Ala Ser Ala Ala Pro Thr Gly Pro Phe Phe Cys Ala Thr
 1 5 10 15
 Ala Trp Leu Trp Ala Arg Met Pro Leu Ser Ala Val Thr Ser His Cys
 20 25 30
 Val Ser Ser Arg Trp Arg Ser Pro Thr Arg Ala Pro Thr Pro Ala Thr
 35 40 45
 Cys Thr Thr Ile Thr Val Ala Cys Thr Asn Ala Ala Ser Ser Thr
 50 55 60

<210> 3649
 <211> 648

<212> DNA

<213> Homo sapiens

<400> 3649

naaaaaataat gcagacataa aatgaaaaaa gattgaagat tgttacagag aaataggtga
60
ggaagcatga tactgaaggc ttgtcactcc tgttttcact tccacacaga caagcatatt
120
tgctcattgt ttgtctgtgt cccctttttt tttcaggttg ctatttctgc agatgtcaaa
180
gaagttctgt taactgatgg gaatgaaaag gccatcagaa atgtgcaaga catcatcaca
240
aggaatcaga aggctggtgt gtttaagacc cagaaaatat caagctgcgt tttacgatgg
300
gataatgaga cagatgtctc tcaactggaa ggacattttg acattgttat gtgtgctgac
360
tgctgttttc tggaccagta cagagccagc cttgttgatg caataaagag attactccag
420
cccaggggga aagcgatggt atttgcccca cgccgaggga atactttaaa ccagttttgc
480
aatctagctg aaaaagctgg tttctgtatc caaagacatg aaaattatga tgaacacatt
540
tcaaacttcc actccaagtt gaaaaaggaa aaccgggaca tatatgaaga aaaccttcat
600
taccgcctc tgcttatttt gaccaaacat ggatagaaga ttaagctt
648

<210> 3650

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3650

Met	Ile	Leu	Lys	Ala	Cys	His	Ser	Cys	Phe	His	Phe	His	Thr	Asp	Lys
1				5					10					15	
His	Ile	Cys	Ser	Leu	Phe	Ala	Val	Leu	Pro	Phe	Phe	Phe	Gln	Val	Ala
			20					25					30		
Ile	Ser	Ala	Asp	Val	Lys	Glu	Val	Leu	Leu	Thr	Asp	Gly	Asn	Glu	Lys
		35				40						45			
Ala	Ile	Arg	Asn	Val	Gln	Asp	Ile	Ile	Thr	Arg	Asn	Gln	Lys	Ala	Gly
	50					55					60				
Val	Phe	Lys	Thr	Gln	Lys	Ile	Ser	Ser	Cys	Val	Leu	Arg	Trp	Asp	Asn
65				70					75					80	
Glu	Thr	Asp	Val	Ser	Gln	Leu	Glu	Gly	His	Phe	Asp	Ile	Val	Met	Cys
			85					90					95		
Ala	Asp	Cys	Leu	Phe	Leu	Asp	Gln	Tyr	Arg	Ala	Ser	Leu	Val	Asp	Ala
			100					105					110		
Ile	Lys	Arg	Leu	Leu	Gln	Pro	Arg	Gly	Lys	Ala	Met	Val	Phe	Ala	Pro
		115				120						125			
Arg	Arg	Gly	Asn	Thr	Leu	Asn	Gln	Phe	Cys	Asn	Leu	Ala	Glu	Lys	Ala
		130				135					140				
Gly	Phe	Cys	Ile	Gln	Arg	His	Glu	Asn	Tyr	Asp	Glu	His	Ile	Ser	Asn
145				150					155					160	
Phe	His	Ser	Lys	Leu	Lys	Lys	Glu	Asn	Pro	Asp	Ile	Tyr	Glu	Glu	Asn

165 170 175
 Leu His Tyr Pro Pro Leu Leu Ile Leu Thr Lys His Gly
 180 185

<210> 3651

<211> 2469

<212> DNA

<213> Homo sapiens

<400> 3651

ggctgtaccg gaacgtgggg cgaggcgctg ttcacaaag aaaaagggtt cttttggcca
 60
 cccaccactg gcccacatggc tgccgtgcag atggatcctg agctagccaa gcgcctcttc
 120
 tttgaagggg cactgtgggt catcctgaac atgcccgaagg gaacagagtt tgggattgac
 180
 tataactcct gggaggtcgg gcccaagttc cggggcgctga agatgatccc tccaggcatc
 240
 cacttcctcc actacagctc tgtggacaag gctaataccga aggaagtagg ccctcgtatg
 300
 gggtttcttc ttagcctgca ccagcggggg ctgacagtgc tgcgctggag cacactcagg
 360
 gaagaggtag acctgtcccc agccccagag tctgaggtgg aggccatgag ggccaacctc
 420
 caggagctgg accagttcct ggggccttac ccatatgcc aacctgaaga gtggatctca
 480
 ctcaccaact tcacagcga agccacagtg gagaagctac agcccgagaa tcgacagatc
 540
 tgtgcctttt ccgatgtgct acctgtgctc tccatgaagc acaccaagga ccgcgtgggg
 600
 cagaatctac ccgctgtgg cattgagtgc aaaagctacc aagagggcct ggcccggcta
 660
 ccagagatga agcccagagc cgggacagag atccgcttct cagagctgcc caccagatg
 720
 ttcccagagg gtgccacgcc agctgagata accaagcaca gcatggacct gagctatgcc
 780
 ctggagactg tgctcatcaa gcagttcccc agcagcccc aggatgtgct tggatgaactc
 840
 cagtttgctt ttgtgtgctt cctgctgggg aatgtgtacg aggcatttga gcattggaag
 900
 cggtcctgc acctcctgtg ccggtcagaa gcagccatga tgaagcacca caccctctac
 960
 atcaacctca tgtccatcct gtaccaccag cttggtgaga tccccgctga cttcttcgta
 1020
 gacattgtct cccaagacaa ctctctcacc agcaccttac aggttttctt ttcctctgcc
 1080
 tgcagcattg ccgtggatgc caccctgaga aagaaagctg aaaagttcca agctcacctg
 1140
 accaagaagt tccggtggga ctttgctgcg gaacctgagg actgtgcccc ggtgggtggg
 1200
 gagtccctg agggcatcga gatgggctaa ctcggggagc gctctcagct gcgagggggc
 1260
 cttccccaca gggctgcagt cctggcctct ccatttactt cttcccatcc tgggaacctg
 1320

cagggcagca atctctccag gtcctgcaaa gatggagcca gaattccctt tttactgat
 1380
 aaatatattt cttcattgcc aaagaggctg tacccatcct gaaggcacat ttgtgggttc
 1440
 cccatcagcc aggccttggg gctaacctgg ctgaatttca cacaggctct tacacacaca
 1500
 cgctcctagg agacatctgc ctacacggca accatatttc ctctgaatga gaaggaattg
 1560
 aacaaaaagt ccaagaaaaga actgattggt tgttccatag gagcttagga aacaagaaac
 1620
 cctggattgc ccaggggggc tgagaagttg gttgggtgact ttttttgagg ttaaataaag
 1680
 ggtgatgggg agatcagccc gaattgccgc ctgcctcttg ctaaataagga gcagaggact
 1740
 tggcctgcag ctcccttgga gcccttgatt gggaagagag tttcaagga ggcagctgga
 1800
 ttcaatctag caggtggtca gcttcagctt tctccatcga aatcccatc tctgtccag
 1860
 aggcccagtg ggtcatctcc caaggtgggt gtggaccctg gcctcagagg ccttgctggt
 1920
 gctgtcacct ccacctggt ccattccgag gcctcaccca gaagtgggac cctccccttc
 1980
 ctcaccagag ccaccgtgac tgtttctgat gacctggaga gtcaacaaca accagaaagg
 2040
 tttctgcccga gagcaggctt cttaaaggct ttacgaagtt ttgtgccttc caagtgtga
 2100
 agaagacctg gtcagcctaa atcttcccag tcccgtgtg gagctgtcag tcaccggagt
 2160
 aatgagctcc tggttcctcg ggagtccttc gtgctgtgtg gcaggggttc tctctagaca
 2220
 agtacacagg ccttgccacc ctgacatcaa actggtgtac tatgatcaca gtcctgtgac
 2280
 catccttttc caagactggg gctcacacca tgtttttgaa tgagaatccc tgctggttga
 2340
 gacttttgc tccactgtt tccttgagga tgtttttcca agagcataat gtacattaaa
 2400
 gtcttcgagt tgagacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2460
 aaaaaaaaaa
 2469

<210> 3652

<211> 384

<212> PRT

<213> Homo sapiens

<400> 3652

Met	Ala	Ala	Val	Gln	Met	Asp	Pro	Glu	Leu	Ala	Lys	Arg	Leu	Phe	Phe
1				5				10					15		
Glu	Gly	Ala	Thr	Val	Val	Ile	Leu	Asn	Met	Pro	Lys	Gly	Thr	Glu	Phe
			20				25					30			
Gly	Ile	Asp	Tyr	Asn	Ser	Trp	Glu	Val	Gly	Pro	Lys	Phe	Arg	Gly	Val
	35						40				45				
Lys	Met	Ile	Pro	Pro	Gly	Ile	His	Phe	Leu	His	Tyr	Ser	Ser	Val	Asp

50				55				60							
Lys 65	Ala	Asn	Pro	Lys	Glu 70	Val	Gly	Pro	Arg	Met 75	Gly	Phe	Phe	Leu 80	Ser
Leu	His	Gln	Arg	Gly 85	Leu	Thr	Val	Leu	Arg 90	Trp	Ser	Thr	Leu 95	Arg	Glu
Glu	Val	Asp	Leu	Ser 100	Pro	Ala	Pro	Glu	Ser 105	Glu	Val	Glu	Ala 110	Met	Arg
Ala	Asn	Leu	Gln	Glu	Leu	Asp	Gln	Phe	Leu	Gly	Pro	Tyr	Pro	Tyr	Ala
Thr	Leu	Lys	Lys	Trp	Ile	Ser	Leu	Thr	Asn	Phe	Ile	Ser	Glu	Ala	Thr
Val	Glu	Lys	Leu	Gln	Pro	Glu	Asn	Arg	Gln	Ile	Cys	Ala	Phe	Ser	Asp
145					150					155					160
Val	Leu	Pro	Val	Leu	Ser	Met	Lys	His	Thr	Lys	Asp	Arg	Val	Gly	Gln
					165					170					175
Asn	Leu	Pro	Arg	Cys	Gly	Ile	Glu	Cys	Lys	Ser	Tyr	Gln	Glu	Gly	Leu
					180				185					190	
Ala	Arg	Leu	Pro	Glu	Met	Lys	Pro	Arg	Ala	Gly	Thr	Glu	Ile	Arg	Phe
					195			200				205			
Ser	Glu	Leu	Pro	Thr	Gln	Met	Phe	Pro	Glu	Gly	Ala	Thr	Pro	Ala	Glu
							215				220				
Ile	Thr	Lys	His	Ser	Met	Asp	Leu	Ser	Tyr	Ala	Leu	Glu	Thr	Val	Leu
225					230					235					240
Ile	Lys	Gln	Phe	Pro	Ser	Ser	Pro	Gln	Asp	Val	Leu	Gly	Glu	Leu	Gln
					245				250					255	
Phe	Ala	Phe	Val	Cys	Phe	Leu	Leu	Gly	Asn	Val	Tyr	Glu	Ala	Phe	Glu
					260			265					270		
His	Trp	Lys	Arg	Leu	Leu	His	Leu	Leu	Cys	Arg	Ser	Glu	Ala	Ala	Met
								280				285			
Met	Lys	His	His	Thr	Leu	Tyr	Ile	Asn	Leu	Met	Ser	Ile	Leu	Tyr	His
						295					300				
Gln	Leu	Gly	Glu	Ile	Pro	Ala	Asp	Phe	Phe	Val	Asp	Ile	Val	Ser	Gln
305					310					315					320
Asp	Asn	Phe	Leu	Thr	Ser	Thr	Leu	Gln	Val	Phe	Phe	Ser	Ser	Ala	Cys
					325				330					335	
Ser	Ile	Ala	Val	Asp	Ala	Thr	Leu	Arg	Lys	Lys	Ala	Glu	Lys	Phe	Gln
					340			345				350			
Ala	His	Leu	Thr	Lys	Lys	Phe	Arg	Trp	Asp	Phe	Ala	Ala	Glu	Pro	Glu
					355		360					365			
Asp	Cys	Ala	Pro	Val	Val	Val	Glu	Leu	Pro	Glu	Gly	Ile	Glu	Met	Gly
						375					380				

<210> 3653

<211> 283

<212> DNA

<213> Homo sapiens

<400> 3653

ncaaagagca agggtggatg cccaggcca gccaggagc ttggcgccac tggaggaagt

60

gcattatacc aatcaqaqct tcttttgctg ctgctgaaat ggaacggtgc catcaggccg

120

tcttctccac tggagatgct ccttcagctc agcaggacgc tagctcggaa ctcaqactgc

180

acattttttgc ggattgggag gagggccgac gccgtggccg gatagtctct ggagctgcct
 240
 tttgggggtg tttgcctggt ggcattttca gtactccacg cgt
 283

<210> 3654
 <211> 88
 <212> PRT
 <213> Homo sapiens

<400> 3654
 Met Pro Gln Ala Ser Pro Gly Ala Trp Arg His Trp Arg Lys Cys Ile
 1 5 10 15
 Ile Pro Ile Arg Ala Ser Phe Ala Ala Glu Met Glu Arg Cys His
 20 25 30
 Gln Ala Val Phe Ser Thr Gly Asp Ala Pro Ser Ala Gln Gln Asp Ala
 35 40 45
 Ser Ser Glu Leu Arg Leu His Ile Phe Ala Asp Trp Glu Glu Gly Arg
 50 55 60
 Arg Arg Gly Arg Ile Val Ser Gly Ala Ala Phe Trp Gly Cys Leu Pro
 65 70 75 80
 Val Gly Ile Phe Ser Thr Pro Arg
 85

<210> 3655
 <211> 3477
 <212> DNA
 <213> Homo sapiens

<400> 3655
 nttttttttt tttttttttt tttttttttt tttttttttt ttttgactg attcagactt
 60
 taatggaggt gctcatttca atgccacaga ggtgggtggca actgtggaac gtggcatggg
 120
 gagtgaagag ttgctctggt gcagctggag gaagaacagg gaacctaggg ttggggagag
 180
 atgtatagag gaaaactccc ccaggcacac agcctccgct ctggaccaac gcaggcttca
 240
 gtgagtacac acaaaggaac tgatgtcaag gccctttcta tgacccttcc cattctagca
 300
 agacctccca cccagtcac cttgggatct acagccacat gaaatacaga cacatcgttc
 360
 ccccaagtca ggccagtttt aggccattga gttatgggga aatgattaat gggatgaatg
 420
 aaaaacaaat aaaataaata aataaataaa tacactaaag ccttattagc caggcgtgat
 480
 cacatgcca acactcccct ccatcccagc actatgcaca gttcacggct catatgcaaa
 540
 gtggaagaca cgtgggacaa gagcaaagca caagtgacac atggtccttc tctaacacct
 600
 cagcacacca accctgacgc tcccatcaca gatgctgatc attcttcac ggacccctt
 660
 ttataataat cctcattcac atttctagtt tctgaggga gagagaaaga gaaaggaaga
 720

agtggaaagt gcggaacccc aatgagtagg gcacagaaag gagggcgagc agagacagca
780
agaggtcagg taagccaagg agcagcggag caggtcaatc aggggaagttc tgggcaccct
840
ggggctcagg ggatctcagg ggggtgaacta tcacagatca ggacagcaag gttccaggag
900
gatgagacag aggttccacg tctccaggca agcagaggaa tcacagcaca ctgggättac
960
ggaacttgcg tccagcaaac ttagccttgc tgcccaagag cctcttcaat tctgaggagt
1020
tggttgatt tggccagacg ctccgagcgg cagggggcac cagtcttgat ctgtcctgtg
1080
cagagcccca ccacaaggtc agcaatgaat gtgtcctcag tctccccaga gcggtggctc
1140
accatcacc cccagccatt ctctggggc agcttgacg cctgaagaga ctgggtcacg
1200
gagccgatct ggttgacttt gagcaggagg cagttgcagg ccttctcggt cacggcccgc
1260
tcaatacgtt ttgggttggt cactgtgaga tcatcccca caatctggat tcctacattg
1320
gctgtgaact tctgccaagc tcccaatca tcctgggtcaa atgggtcctc aatggagacc
1380
actgggtagt ccctgacaaa gtctggtag agtgcccca gctgggtccc agtgatgtac
1440
ctgtgggggt cagtgggaga cttgaagtcc aagtcatatt tgccatcacg ataaaactcg
1500
gaggcagcaa catccatgcc gatgacaacc tggtcagtgt agccggcctt tgcgattgca
1560
gtcttcacca gctccagtgc ttctttgttc tccaggatgt taggtgcgaa tccaccttca
1620
tcacccacat tgggtggcatc ctcccgtag ttctccttga tgacccccctt gagtgtatgg
1680
tagacctctg cacctagtcg catggcttcc ttgaaggagc tggctccac aggcagaatc
1740
atgaactcct gcatggccag cttgtttcca gcatgggagc ccccgttgat cacattgaag
1800
gctggcactg ggagtatgag gtcagggttc ccagccaagt cagcgatgtg gcggtacagg
1860
gggacccccct tctcaaaggc tggtgagcac atcaataaaa ctattgcgcc tgccctgggt
1920
agcaagaaac tgaacgtcac agaacaagag aagattgaca aactgatgat cgagatggat
1980
ggaacagaaa ataaatctaa gtttggtgag aacgccattc tgggggtgtc ccttgccgctc
2040
tgcaaagctg gtgcccgttga gaaggggtc ccctgtacc gccacatcgc tgacttggct
2100
ggcaactctg aagtcacct gccagtcctg gcgttcaatg tcatcaatgg cggttctcat
2160
gctggcaaca agctggccat gcaggagttc atgatcctcc cagtcgggtgc agcaaacttc
2220
aggggaagcca tgcgcattgg agcagagggt taccacaacc tgaagaatgt catcaaggag
2280
aaatatggga aagatgccac caatgtgggg gatgaaggcg ggtttgctcc caacatcctg
2340

gagaataaag aaggcctgga gctgctgaag actgctattg ggaaagctgg ctacactgat
 2400
 aaggtgggtca tcggcatgga cgtagcggcc tccgagttct tcaggtctgg gaagtatgac
 2460
 ctggacttca agtctcccgga tgaccccgagc aggtacatct cgcctgacca gctgggtgac
 2520
 ctgtacaagt ccttcatcaa ggactacca gtggtgtcta tcgaagatcc ctttgaccag
 2580
 gatgactggg gagcttggca gaagttcaca gccagtgcag gaatccaggt agtgggggat
 2640
 gatctcacag tgaccaaccc caagaggatc gccagggccg tgaacgagaa gtccctgcaac
 2700
 tgccctctgc tcaaagtcaa ccagattggc tccgtgaccg agtctcttca ggcgtgcaag
 2760
 ctggcccagg ccaatggttg gggcgctcatg gtgtctcatc gttcggggga gactgaagat
 2820
 accttcatcg ctgacctggt tgtggggctg tgcactgggc agatcaagac tgggtgccct
 2880
 tgccgatctg agcgcttggc caagtacaac cagctcctca gaattgaaga ggagctgggc
 2940
 agcaaggcta agtttgccgg caggaacttc agaaaccctc tggccaagta agctgtgggc
 3000
 aggcaagccc ttcggtcacc tgttggttac acagaccctc ccctcgtgt cagctcaggc
 3060
 agctcgaggc ccccgaccaa cacttgaggc ggtccctgct agttagcgcc ccaccgccgt
 3120
 ggagttcgta ccgcttcctt agaacttcta cagaagccaa gtcctctgga gccctgttgg
 3180
 cagctctagc tttgcagtcg tgtaattggc ccaagtcatt gtttttctcg cctcactttc
 3240
 caccaagtgt ctagagtcac gtgagcctcg tgtcatctcc ggggtggcca caggctagat
 3300
 ccccggtggt tttgtgctca aaataaaaag cctcagtgac ccatgaaaaa aaaaaaaaaa
 3360
 actcgtgccg actcgtgccg aattcggaga ncccatgtcc ggagacccca cggctggcac
 3420
 ttcgggcccc gtatgacctg ggacctcgcc gtcccgagac ctccctgggtc cctccgt
 3477

<210> 3656

<211> 429

<212> PRT

<213> Homo sapiens

<400> 3656

Met	Ala	Ser	Leu	Lys	Glu	Leu	Ala	Pro	Thr	Gly	Arg	Ile	Met	Asn	Ser
1				5					10					15	
Cys	Met	Ala	Ser	Leu	Phe	Pro	Ala	Trp	Glu	Pro	Pro	Leu	Ile	Thr	Leu
			20					25					30		
Lys	Ala	Gly	Thr	Gly	Ser	Met	Arg	Ser	Gly	Phe	Pro	Ala	Lys	Ser	Ala
		35					40				45				
Met	Trp	Arg	Tyr	Arg	Gly	Thr	Pro	Phe	Ser	Lys	Ala	Val	Glu	His	Ile
	50					55					60				
Asn	Lys	Thr	Ile	Ala	Pro	Ala	Leu	Val	Ser	Lys	Lys	Leu	Asn	Val	Thr

65					70					75				80	
Glu	Gln	Glu	Lys	Ile	Asp	Lys	Leu	Met	Ile	Glu	Met	Asp	Gly	Thr	Glu
				85					90					95	
Asn	Lys	Ser	Lys	Phe	Gly	Ala	Asn	Ala	Ile	Leu	Gly	Val	Ser	Leu	Ala
			100					105					110		
Val	Cys	Lys	Ala	Gly	Ala	Val	Glu	Lys	Gly	Val	Pro	Leu	Tyr	Arg	His
		115					120				125				
Ile	Ala	Asp	Leu	Ala	Gly	Asn	Ser	Glu	Val	Ile	Leu	Pro	Val	Pro	Ala
	130					135				140					
Phe	Asn	Val	Ile	Asn	Gly	Gly	Ser	His	Ala	Gly	Asn	Lys	Leu	Ala	Met
145				150						155				160	
Gln	Glu	Phe	Met	Ile	Leu	Pro	Val	Gly	Ala	Ala	Asn	Phe	Arg	Glu	Ala
			165					170					175		
Met	Arg	Ile	Gly	Ala	Glu	Val	Tyr	His	Asn	Leu	Lys	Asn	Val	Ile	Lys
		180					185					190			
Glu	Lys	Tyr	Gly	Lys	Asp	Ala	Thr	Asn	Val	Gly	Asp	Glu	Gly	Gly	Phe
	195						200				205				
Ala	Pro	Asn	Ile	Leu	Glu	Asn	Lys	Glu	Gly	Leu	Glu	Leu	Lys	Thr	
	210					215				220					
Ala	Ile	Gly	Lys	Ala	Gly	Tyr	Thr	Asp	Lys	Val	Val	Ile	Gly	Met	Asp
225				230						235				240	
Val	Ala	Ala	Ser	Glu	Phe	Phe	Arg	Ser	Gly	Lys	Tyr	Asp	Leu	Asp	Phe
			245						250				255		
Lys	Ser	Pro	Asp	Asp	Pro	Ser	Arg	Tyr	Ile	Ser	Pro	Asp	Gln	Leu	Ala
		260						265					270		
Asp	Leu	Tyr	Lys	Ser	Phe	Ile	Lys	Asp	Tyr	Pro	Val	Val	Ser	Ile	Glu
	275						280					285			
Asp	Pro	Phe	Asp	Gln	Asp	Asp	Trp	Gly	Ala	Trp	Gln	Lys	Phe	Thr	Ala
	290				295						300				
Ser	Ala	Gly	Ile	Gln	Val	Val	Gly	Asp	Asp	Leu	Thr	Val	Thr	Asn	Pro
305				310						315				320	
Lys	Arg	Ile	Ala	Gln	Ala	Val	Asn	Glu	Lys	Ser	Cys	Asn	Cys	Leu	Leu
			325					330					335		
Leu	Lys	Val	Asn	Gln	Ile	Gly	Ser	Val	Thr	Glu	Ser	Leu	Gln	Ala	Cys
		340						345					350		
Lys	Leu	Ala	Gln	Ala	Asn	Gly	Trp	Gly	Val	Met	Val	Ser	His	Arg	Ser
	355					360						365			
Gly	Glu	Thr	Glu	Asp	Thr	Phe	Ile	Ala	Asp	Leu	Val	Val	Gly	Leu	Cys
	370					375					380				
Thr	Gly	Gln	Ile	Lys	Thr	Gly	Ala	Pro	Cys	Arg	Ser	Glu	Arg	Leu	Ala
385				390						395				400	
Lys	Tyr	Asn	Gln	Leu	Leu	Arg	Ile	Glu	Glu	Glu	Leu	Gly	Ser	Lys	Ala
			405					410					415		
Lys	Phe	Ala	Gly	Arg	Asn	Phe	Arg	Asn	Pro	Leu	Ala	Lys			
			420					425							

<210> 3657

<211> 337

<212> DNA

<213> Homo sapiens

<400> 3657

tggtacgtgt tcattttcga ctcaaggcgt acacgtgcag atgtgtcaca tggttcatttt
60

cagctcaagg cgtacacgtg caggtgtgtt acgtgttcat tttcgactca aggcgtacac
 120
 gtgcagatgt gtcacatgtt ctttttcggc tcaaggcgta cacgtgcagg tgtgttacgt
 180
 gttcattttc ggctcaaggc ttacacgtgc aggtgtgcca catgttcatt ttcgggtcaa
 240
 ggcgtacatg tgcaggtgtg ttacatgttc attgtcagct caacgcgtac acgtgcaggt
 300
 gtgccacatg ttcattttcg gttcaaggcg tacgcgt
 337

<210> 3658

<211> 99

<212> PRT

<213> Homo sapiens

<400> 3658

Met	Cys	His	Met	Phe	Ile	Phe	Ser	Ser	Arg	Arg	Thr	Arg	Ala	Gly	Val
1				5					10					15	
Leu	Arg	Val	His	Phe	Arg	Leu	Lys	Ala	Tyr	Thr	Cys	Arg	Cys	Val	Thr
			20					25					30		
Cys	Ser	Phe	Ser	Ala	Gln	Gly	Val	His	Val	Gln	Val	Cys	Tyr	Val	Phe
		35				40						45			
Ile	Phe	Gly	Ser	Arg	Leu	Thr	Arg	Ala	Gly	Val	Pro	His	Val	His	Phe
		50				55					60				
Arg	Leu	Lys	Ala	Tyr	Met	Cys	Arg	Cys	Val	Thr	Cys	Ser	Leu	Ser	Ala
65					70					75				80	
Gln	Arg	Val	His	Val	Gln	Val	Cys	His	Met	Phe	Ile	Phe	Gly	Ser	Arg
			85						90					95	

Arg Thr Arg

<210> 3659

<211> 1025

<212> DNA

<213> Homo sapiens

<400> 3659

naagctttta ctgctgatgg tgatcaagtt ttgcaggac gttattattc atctgaaaat
 60
 acaagaccta agttcctaag cagagatgtg gattctgaaa taagtgactt ggagaatgag
 120
 gttgaaaata agacggccca gatattaaat cttcagcaac atttatctgc ccttgaaaaa
 180
 gatattaaac acaatgagga acttcttaaa aggtgccaac tacattataa agaactaaag
 240
 atgaaaataa gaaaaaatat ttctgaaatt cggaacttg agaacataga agaacaccag
 300
 tctgtagata ttgcaacttt ggaagatgaa gctcaggaaa ataaaagcaa aatgaaaatg
 360
 gttgaggaac atatggagca acaaaaagaa aatatggagc atcttaaaag tctgaaaata
 420
 gaagcagaaa ataagtatga tgcaattaaa ttcaaaatta atcaactatc ggagctagca
 480

gaccactta aggatgaatt aaaccttgct gattctgaag tggataacca aaaacgaggg
 540
 aaacgacatt atgaaaaaaaa acaaaaagaa cacttgata ccttaaataa aaagaaacga
 600
 gaactggata tgaaagagaa agaactagag gagaaaatgt cacaagcaag acaaatctgc
 660
 ccagagcgta tagaagtaga aaaatctgca tcaattctgg acaagaaat taatcgatta
 720
 aggcagaaga tacaggcaga acatgctagt catggagatc gagaggaaat aatgaggcag
 780
 taccaagaag caagagagac ctatcttgat ctggatagta aagtgaggac tttaaaaaag
 840
 ttattaaat tactgggaga aatcatggag cacagattca agacatatca acaatttaga
 900
 aggtgtttga ctttacgatg caaattatac ttgacaact tactatctca gcgggcctat
 960
 tgtggaaaaa tgaattttga ccacaagaat gaaactctaa gtatatcagt tcagcctgga
 1020
 gaaaa
 1025

<210> 3660

<211> 341

<212> PRT

<213> Homo sapiens

<400> 3660

Xaa	Ala	Phe	Thr	Ala	Asp	Gly	Asp	Gln	Val	Phe	Ala	Gly	Arg	Tyr	Tyr
1				5					10					15	
Ser	Ser	Glu	Asn	Thr	Arg	Pro	Lys	Phe	Leu	Ser	Arg	Asp	Val	Asp	Ser
			20					25					30		
Glu	Ile	Ser	Asp	Leu	Glu	Asn	Glu	Val	Glu	Asn	Lys	Thr	Ala	Gln	Ile
		35				40						45			
Leu	Asn	Leu	Gln	Gln	His	Leu	Ser	Ala	Leu	Glu	Lys	Asp	Ile	Lys	His
	50				55						60				
Asn	Glu	Glu	Leu	Leu	Lys	Arg	Cys	Gln	Leu	His	Tyr	Lys	Glu	Leu	Lys
65					70				75					80	
Met	Lys	Ile	Arg	Lys	Asn	Ile	Ser	Glu	Ile	Arg	Glu	Leu	Glu	Asn	Ile
			85					90						95	
Glu	Glu	His	Gln	Ser	Val	Asp	Ile	Ala	Thr	Leu	Glu	Asp	Glu	Ala	Gln
			100					105					110		
Glu	Asn	Lys	Ser	Lys	Met	Lys	Met	Val	Glu	Glu	His	Met	Glu	Gln	Gln
	115					120						125			
Lys	Glu	Asn	Met	Glu	His	Leu	Lys	Ser	Leu	Lys	Ile	Glu	Ala	Glu	Asn
	130					135					140				
Lys	Tyr	Asp	Ala	Ile	Lys	Phe	Lys	Ile	Asn	Gln	Leu	Ser	Glu	Leu	Ala
145					150				155					160	
Asp	Pro	Leu	Lys	Asp	Glu	Leu	Asn	Leu	Ala	Asp	Ser	Glu	Val	Asp	Asn
			165					170						175	
Gln	Lys	Arg	Gly	Lys	Arg	His	Tyr	Glu	Lys	Lys	Gln	Lys	Glu	His	Leu
		180						185					190		
Asp	Thr	Leu	Asn	Lys	Lys	Lys	Arg	Glu	Leu	Asp	Met	Lys	Glu	Lys	Glu
		195					200					205			
Leu	Glu	Glu	Lys	Met	Ser	Gln	Ala	Arg	Gln	Ile	Cys	Pro	Glu	Arg	Ile

210	215	220
Glu Val Glu Lys Ser Ala Ser Ile Leu Asp Lys Glu Ile Asn Arg Leu		
225	230	235
Arg Gln Lys Ile Gln Ala Glu His Ala Ser His Gly Asp Arg Glu Glu		240
	245	250
Ile Met Arg Gln Tyr Gln Glu Ala Arg Glu Thr Tyr Leu Asp Leu Asp		255
	260	265
Ser Lys Val Arg Thr Leu Lys Lys Phe Ile Lys Leu Leu Gly Glu Ile		270
	275	280
Met Glu His Arg Phe Lys Thr Tyr Gln Gln Phe Arg Arg Cys Leu Thr		285
	290	295
Leu Arg Cys Lys Leu Tyr Phe Asp Asn Leu Leu Ser Gln Arg Ala Tyr		300
305	310	315
Cys Gly Lys Met Asn Phe Asp His Lys Asn Glu Thr Leu Ser Ile Ser		320
	325	330
Val Gln Pro Gly Glu		335
	340	

<210> 3661

<211> 1117

<212> DNA

<213> Homo sapiens

<400> 3661

```

gtgcactcgg attggcaaag cccgagtggg ctgtctccac tgggttctgg gtcattcccc
60
tgtggcaaaa gctcctcctg catctgatac ttgggtcttc tccctctttt ataaaacaat
120
ttagatccta gaatgtgcct tttcacaatg gcttcgtttc caattttcac tgttatttgg
180
caaaggggtg caacattact atttgtggag gttcccggca gagcagggtt tgcaatgtag
240
gtttcaattt tgctgggttc ttcagcaata tttgtggtt tgctcagtga tcctccagga
300
tcagcaacat agtttgactc ctccggtatt tctcccctgg tatgtgatgt agttttcttt
360
ttctccttaa tgcttttggg tctgcttgca aacctacca ctttatctgg ctggggctta
420
ctgtcatctt tcagggactg actgacagct gggctctgaa aggctctgtg gttgctgctg
480
gtcatggcag caatggcatt gctgtgcatg atcaccgatg aaaactggct gctgtgtaca
540
atgaccgagg gtgcagagcc actgtagctg atcacagagg cggcattctc actgctatta
600
ctcaaagata aaacaggtac atcccctgcc cggaggtcag aactgacagc attttcagt
660
gaagaaactg acacctcagt tgaataaaag ttattgtcaa gatccatttt caatgcctcc
720
tctccccatt tggtagcctc tgcattttgt acattggcag aagtgggtat gtcctgacat
780
gcagatgttt ccaatgggat ggctggactg ttggtcaggg tgtttacagt atcttggaaa
840
ttcagcgttg gtaattcaga gctgtgtgga ttctgaacaa cataggtacc aggtgcagac
900

```

tcattcattt gactgttttc tcgtgcattt tcataggaag aatttcggta gctcttataa
 960
 ggggctctct tgcatttcat aggcagtagc ctataaagtt tatacggata gacactaggc
 1020
 ttcaagcctc catttgctgt ttttttactg atggaaagtc tatgatcgat ggcattggaaa
 1080
 gactttctgat gatttttgag tatatagtag gtcatga
 1117

<210> 3662

<211> 371

<212> PRT

<213> Homo sapiens

<400> 3662

Met	Thr	Tyr	Tyr	Ile	Leu	Lys	Asn	His	Gln	Lys	Ser	Phe	His	Ala	Ile
1				5					10					15	
Asp	His	Arg	Leu	Ser	Ile	Ser	Lys	Lys	Thr	Ala	Asn	Gly	Gly	Leu	Lys
			20				25						30		
Pro	Ser	Val	Tyr	Pro	Tyr	Lys	Leu	Tyr	Arg	Leu	Leu	Pro	Met	Lys	Cys
		35					40					45			
Lys	Arg	Ala	Pro	Tyr	Lys	Ser	Tyr	Arg	Asn	Ser	Ser	Tyr	Glu	Asn	Ala
	50					55					60				
Arg	Glu	Asn	Ser	Gln	Met	Asn	Glu	Ser	Ala	Pro	Gly	Thr	Tyr	Val	Val
65				70					75					80	
Gln	Asn	Pro	His	Ser	Ser	Glu	Leu	Pro	Thr	Leu	Asn	Phe	Gln	Asp	Thr
			85						90					95	
Val	Asn	Thr	Leu	Thr	Asn	Ser	Pro	Ala	Ile	Pro	Leu	Glu	Thr	Ser	Ala
			100					105						110	
Cys	Gln	Asp	Ile	Pro	Thr	Ser	Ala	Asn	Val	Gln	Asn	Ala	Glu	Gly	Thr
		115					120					125			
Lys	Trp	Gly	Glu	Glu	Ala	Leu	Lys	Met	Asp	Leu	Asp	Asn	Asn	Phe	Tyr
	130					135					140				
Ser	Thr	Glu	Val	Ser	Val	Ser	Ser	Thr	Glu	Asn	Ala	Val	Ser	Ser	Asp
145					150					155					160
Leu	Arg	Ala	Gly	Asp	Val	Pro	Val	Leu	Ser	Leu	Ser	Asn	Ser	Ser	Glu
			165					170						175	
Asn	Ala	Ala	Ser	Val	Ile	Ser	Tyr	Ser	Gly	Ser	Ala	Pro	Ser	Val	Ile
		180						185					190		
Val	His	Ser	Ser	Gln	Phe	Ser	Ser	Val	Ile	Met	His	Ser	Asn	Ala	Ile
		195						200					205		
Ala	Ala	Met	Thr	Ser	Ser	Asn	His	Arg	Ala	Phe	Ser	Asp	Pro	Ala	Val
	210						215					220			
Ser	Gln	Ser	Leu	Lys	Asp	Asp	Ser	Lys	Pro	Glu	Pro	Asp	Lys	Val	Gly
225				230						235				240	
Arg	Phe	Ala	Ser	Arg	Pro	Lys	Ser	Ile	Lys	Glu	Lys	Lys	Lys	Thr	Thr
			245					250						255	
Ser	His	Thr	Arg	Gly	Glu	Ile	Pro	Glu	Glu	Ser	Asn	Tyr	Val	Ala	Asp
		260						265					270		
Pro	Gly	Gly	Ser	Leu	Ser	Lys	Thr	Thr	Asn	Ile	Ala	Glu	Glu	Thr	Ser
		275					280					285			
Lys	Ile	Glu	Thr	Tyr	Ile	Ala	Lys	Pro	Ala	Leu	Pro	Gly	Thr	Ser	Thr
	290					295					300				
Asn	Ser	Asn	Val	Ala	Pro	Leu	Cys	Gln	Ile	Thr	Val	Lys	Ile	Gly	Asn

```

305          310          315          320
Glu Ala Ile Val Lys Arg His Ile Leu Gly Ser Lys Leu Phe Tyr Lys
          325          330          335
Arg Gly Arg Arg Pro Lys Tyr Gln Met Gln Glu Glu Leu Leu Pro Gln
          340          345          350
Gly Asn Asp Pro Glu Pro Ser Gly Asp Ser Pro Leu Gly Leu Cys Gln
          355          360          365
Ser Glu Cys
          370

```

<210> 3663
 <211> 481
 <212> DNA
 <213> Homo sapiens

```

<400> 3663
gatacctgata cgttgctgga atggctgcag atgggacagg gagatgaaag ggacatgcag
60
ctaatagccccc tggagcagct atgcatgctg cttttgatgt ctgacaatgt ggatcgctgt
120
tttgaaacat gtcctcctcg cactttctta ccagcccttt acaaaaatttt tcttgatgaa
180
agtgtctccag acaatgtatt agaggtgaca gcccggtgcca taacatacta cctggatgta
240
tctgcggaat gtaccggaag gattgttggg gtagatggag ctataaaaagc actttgtaat
300
cgtttggtgg tagttgaact taacaacagg actagcagag acttagctga acagtgtgta
360
aaggtaagta ttacttattg gctcattact tatttttctc agacctctca gggatgagta
420
ttggctcatt taaacatcac ttagagactg aaaaatgtat ttactaaaaa aaaagtcgac
480
g
481

```

<210> 3664
 <211> 138
 <212> PRT
 <213> Homo sapiens

```

<400> 3664
Asp Pro Asp Thr Leu Leu Glu Trp Leu Gln Met Gly Gln Gly Asp Glu
1          5          10          15
Arg Asp Met Gln Leu Ile Ala Leu Glu Gln Leu Cys Met Leu Leu Leu
20          25          30
Met Ser Asp Asn Val Asp Arg Cys Phe Glu Thr Cys Pro Pro Arg Thr
35          40          45
Phe Leu Pro Ala Leu Tyr Lys Ile Phe Leu Asp Glu Ser Ala Pro Asp
50          55          60
Asn Val Leu Glu Val Thr Ala Arg Ala Ile Thr Tyr Tyr Leu Asp Val
65          70          75          80
Ser Ala Glu Cys Thr Arg Arg Ile Val Gly Val Asp Gly Ala Ile Lys
85          90          95
Ala Leu Cys Asn Arg Leu Val Val Val Glu Leu Asn Asn Arg Thr Ser

```

	100		105		110										
Arg	Asp	Leu	Ala	Glu	Gln	Cys	Val	Lys	Val	Ser	Ile	Thr	Tyr	Trp	Leu
	115						120					125			
Ile	Thr	Tyr	Phe	Ser	Gln	Thr	Ser	Gln	Gly						
	130						135								

<210> 3665

<211> 6633

<212> DNA

<213> Homo sapiens

<400> 3665

```

aggcgcgccc ctgacggact ggccgagccg gcggtgagag gccggcgcggt cgggagcggg
60
ccgcgcggca ccatgtcggc caaggtgcgg ctcaagaagc tggagcagct gctcctggac
120
gggccctggc gcaacgagag cgccctgagc gtggaaacgc tgctcgacgt gctcgtctgc
180
ctgtacaccg agtgcagcca ctcgccctg cgccgcgaca agtacgtggc cgagttcctc
240
gagtgggcta aaccatttac acagctggtg aaagaaatgc agcttcatcg agaagacttt
300
gaaataatta aagtaattgg aagaggtgct tttggtgagg ttgctgttgt caaaatgaag
360
aatactgaac gaatttatgc aatgaaaatc ctcaacaagt gggagatgct gaaaagagca
420
gagaccgctg gcttcgaga ggagcgcgat gtgctggtga acggcgactg ccagtggatc
480
accgcgctgc actacgcctt tcaggacgag aaccacctgt acttagtcat ggattactat
540
gtgggtggtg atttactgac cctgctcagc aaatttgaag acaagcttcc ggaagatatg
600
gcgaggttct acattggtga aatggtgctg gccattgact ccatccatca gcttcattac
660
gtgcacagag acattaaacc tgacaatgtc cttttggacg tgaatggtca tatccgcctg
720
gtgacttttg gatcatgttt gaagatgaat gatgatggca ctgtgcagtc ctccgtggcc
780
gtgggcacac ctgactacat ctgcgcggag atcctgcagg cgatggagga cggcatgggc
840
aaatacgggc ctgagtgtga ctggtggtct ctgggtgtct gcatgtatga gatgctctat
900
ggagaaacgc cgtttttatgc ggagtcactc gtggagacct atgggaagat catgaaccat
960
gaagagcgat tccagttccc atcccatgtc acggatgtat ctgaagaagc gaaggacctc
1020
atccagagac tgatctgcag tagagaacgc cggctggggc agaatggaat agaggatttc
1080
aaaaagcatg cgttttttga aggtctaaat tgggaaaata tacgaaacct agaagcacct
1140
tatattcctg atgtgagcag tccctctgac acatccaact tcgacgtgga tgacgcagtg
1200
ctgagaaaca cggaaatatt acctcctggt tctcacacag gcttttctgg attacatttg
1260

```

ccattcattg gttttacatt cacaacggaa agctgttttt ctgatcgagg ctctctgaag
1320
agcataatgc agtccaacac attaaccaaa gatgaggatg tgcagcgagg cctggagcac
1380
agcctgcaga tggaagctta cgagaggagg attcggaggc tggaacagga gaagctggag
1440
ctgagcagga agctgcaaga gtccacccag accgtgcagt ccctccacgg ctcatctcgg
1500
gccctcagca attcaaaccg agataaagaa atcaaaaagc taaatgaaga aatcgaacgc
1560
ttgaagaata aaatagcaga ttcaaacagg ctggagcgac agcttgagga cacagtggcg
1620
cttcgccaag agcgtgagga ctccacgcag cggctgcggg ggctggagaa gcagcaccgc
1680
gtggtccggc aggagaagga ggagctgcac aagcaactgg ttgaagcctc agagcgggtg
1740
aaatcccagg ccaaggaact caaagatgcc catcagcagc gaaagctggc cctgcaggag
1800
ttctcggagc tgaacgagcg catggcagag ctccgtgccc agaagcagaa ggtgtcccgg
1860
cagctgcgag acaaggagga ggagatggag gtggccacgc agaaggtgga cgccatgcgg
1920
caggaaatgc ggagagctga gaagctcagg aaagagctgg aagctcagct tgatgatgct
1980
gttgctgagg cctccaagga gcgcaagctt cgtgagcaca gcgagaactt ctgcaagcaa
2040
atggaaagcg agctggaggc cctcaaggtg aagcaaggag gccggggagc ggggtgccacc
2100
ttagagcacc agcaagagat ttccaaaatc aaatccgagc tggagaagaa agtcttattt
2160
tatgaagagg aattggctcag acgtgaggcc tcccatgtgc tagaagtga aaatgtgaag
2220
aaggaggtgc atgattcaga aagccaccag ctggccctgc agaaagaaat cttgatgtta
2280
aaagataagt tagaaaagtc aaagcgagaa cggcataacg agatggagga ggcagtaggt
2340
acaataaaag ataaatacga acgagaaaga gcgatgctgt ttgatgaaaa caagaagcta
2400
actgctgaaa atgaaaagct ctgttccttt gtggataaac tcacagctca aaatagacag
2460
ctggaggatg agctgcagga tctggcagcc aagaaggagt cagtggccca ctgggaagct
2520
cagattgcgg aaatcattca gtgggtcagt gacgagaaaag atgcccgggg ttaccttcaa
2580
gctcttgctt ccaagatgac cgaagagctc gaggctttga ggagttctag tctggggctc
2640
agaacactgg acccgctgtg gaaggtgcgc cgcagccaga agctggacat gtccgcgcgg
2700
ctggagctgc agtcggccct ggaggcggag atccgggcca agcagcttgt ccaggaggag
2760
ctcaggaagg tcaaggacgc caacctcacc ttggaaagca aactaaagga ttccgaagcc
2820
aaaaacagag aattattaga agaaatggaa attttgaaga aaaagatgga agaaaaattc
2880

agagcagata ctgggctcaa acttccagat tttcaggatt ccatttttga gtatttcaac
2940
actgtctctc ttgcacatga cctgacattt agagactctc tctcctcctc gtctgcatct
3000
tccttgctag ctttttggga agaaaccagc tcagctagtg agcaagaaac acaagctccg
3060
aagccagaag cgtccccgtc gatgtctgtg gctgcatcag agcagcagga ggacatggct
3120
cggcccccg c agaggccatc cgctgtgccg ttgcccacca cgcaggccct ggctctggct
3180
ggaccgaagc caaaagctca ccagttcagc atcaagtcct tctccagccc tactcagtgc
3240
agccactgca cctccctgat ggttgggctg atccggcagg gctacgctg cgagggtgtg
3300
tcctttgctt gccacgtgtc ctgcaaagac ggtgcccccc aggtgtgccc aatacctccc
3360
gagcagtcca agaggcctct gggcgtggac gtgcagcgag gcacgcgaac agcctacaaa
3420
ggccatgtca aggtcccaaa gccacgggg gtgaagaagg gatggcagcg cgcataatgca
3480
gtcgtctgtg actgcaagct cttcctgtat gatctgcctg aaggaaaatc caccagcct
3540
ggtgtcattg cgagccaagt cttggatctc agagatgacg agttttccgt gagctcagtc
3600
ctggcctcag atgtcattca tgctacacgc cgagatatc catgtatatt cagggtgacg
3660
gcctctctct taggtgcacc ttctaagacc agctcgtctc tcattctgac agaaaatgag
3720
aatgaaaaga ggaagtgggt tgggattcta gaaggactcc agtccatcct tcataaaaaac
3780
cggctgagga atcaggctct gcacgttccc ttggaagcct acgacagctc gctgcctctc
3840
atcaaggcca tcctgacagc tgccatcgtg gatgcagaca ggattgcagt cggcctagaa
3900
gaagggctct atgtcataga ggtcacccga gatgtgatcg tccgtgccgc tgactgtaag
3960
aaggtacacc agatcgagct tgctcccagg gagaagatcg taatcctcct ctgtggccgg
4020
aaccaccatg tgcacctcta tccgtggctg tcccttgatg gagcggaagg cagctttgac
4080
atcaagcttc cggaaaccaa aggctgccag ctcatggcca cggccacact caagaggaac
4140
tctggcacct gcctgtttgt ggccgtgaaa cggtgatcc tttgctatga gatccagaga
4200
acgaagccat tccacagaaa gttcaatgag attgtggctc ccggcagcgt gcagtgcctg
4260
gcggtgctca gggacagget ctgtgtgggc tacccttctg ggttctgcct gctgagcatc
4320
cagggggacg ggcagcctct aaacctggta aatcccaatg acccctcgtg tgcgttcctc
4380
tcacaacagt cttttgatgc cttttgtgct gtggagctcg aaagcgagga gtacctgctt
4440
tgcttcagcc acatgggact gtacgtggac ccgcaaggcc ggagggcacg cgcgcaggag
4500

ctcatgtggc ctgcggctcc tgctgcctgt agttgcagcc ccaccacgt cacggtgtac
4560
agcgagtatg gcgtggacgt ctttgatgtg cgcaccatgg agtgggtgca gaccatcggc
4620
ctgcggagga taaggccctt gaactctgaa ggcaccctca acctcctcaa ctgcgagcct
4680
ccacgcttga tctacttcaa gagcaagttc tcgggagcgg ttctcaacgt gccggacacc
4740
tccgacaaca gcaagaagca gatgctgcgc accaggagca aaaggcgggt cgtcttcaag
4800
gtcccagagg aagagagact gcagcagagg cgagagatgc ttagagaccc agaattgaga
4860
tccaaaatga tatccaaccc aaccaacttc aaccacgtgg ccacatggg ccaggcgac
4920
ggcatgcagg tgctcatgga cctgcctctg agtgctgtgc cccctccca ggaggaaagg
4980
ccgggccccg ctcccaccaa cctggctcgc cagcctccat ccaggaacaa gccctacatc
5040
tcgtggcctt catcaggtgg atcggagcct agcgtgactg tgcctctgag aagtatgtct
5100
gatccagacc aggactttga caaagagcct gattcggact ccaccaaaca ctcaactcca
5160
tcgaatagct ccaacccag cggtccaccg agccccaact ccccccacag gagccagctc
5220
ccctcgaag gcctggagca gccggcctgt gacacctgaa gccgccagct cgccacaggg
5280
gccagggagc tggagatggc ctccagcgtc agtgccaaga ctgagcgggc cctccagtgt
5340
tgtccaagga aatgtagaat cactttgtag atatggagat gaagaagaca aatctttatt
5400
ataatattga tcagttttat gccgcattgt tcgtggcagt agaccacatc tgttcgtctg
5460
cacagctgtg aggcgatgct gttccatctg cacatgaagg accccatac agcctgtctc
5520
ccaccctga caaccgaga gggcatatgg ggccctgcca acaccaacttc ctcagcagaa
5580
accgctcatg acgcggtgc ttcggaagca gacatctggg gacacagcct cagtaccag
5640
tcttttcctt agttcctgaa actttcctag gaccttaaga gaatagtagg aggtcctata
5700
gcattcccag tgtcactaga attttgaaga caggaaagtg gaggttagtc tgtggccttt
5760
ttttcattta gccattgcac agtcagctgc agaagtcttg ctgaccacct agtcatggac
5820
aaaggcccg gaccagtac accctgcgtc cctgtgtgca ttaagttcat tctgggtcgc
5880
agccatgaag tgtcaccagt atctactact gtgaagtcag ctgtgctgtt ttccattcgc
5940
ttccactgct tctgcctcct gccataaaac cagcgagtgt cgtggtgcag gcaggccctg
6000
tggcctgctg ggctgaggga agtcagagcc ccagggcgcc acgaagcagc cactgggata
6060
ccccccccg cccgccttg cccgcccccc cccaccagt cctgccccg catggagccc
6120

ccgtgattag tagcccgat gatcacgtag acccacccaa cacactcctg cacactggcc
 6180
 ccggcccacg gcacagcaat cccctgcgcg tggatttcac ctcacccttt gtaccagatg
 6240
 ttgagtgacc agctctgtgg cctgtgtgctg tcagaggctt gtgattaact gtggcggcag
 6300
 acacagcttg tccacagctt gggccaggct tcccctgtcc tcccaccggt cggctgcttg
 6360
 gcaaggctgt tcaggacgtg cacttcccca agtcggcact gagtggccca gcaccaccta
 6420
 gccctgccac cccactgccc tccctgggct tctgctggat gggcacctgg ggggttcttg
 6480
 tttttacttt tttaatgtaa gtctcagtct ttgtaattaa ttattgaatt gtgagaacat
 6540
 ttttgaacaa tttacctgtc aataaagcag aagacggcag ttttaaagtt aaaaaaaaaa
 6600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
 6633

<210> 3666

<211> 1728

<212> PRT

<213> Homo sapiens

<400> 3666

Met	Ser	Ala	Lys	Val	Arg	Leu	Lys	Lys	Leu	Glu	Gln	Leu	Leu	Leu	Asp
1				5					10					15	
Gly	Pro	Trp	Arg	Asn	Glu	Ser	Ala	Leu	Ser	Val	Glu	Thr	Leu	Leu	Asp
			20					25					30		
Val	Leu	Val	Cys	Leu	Tyr	Thr	Glu	Cys	Ser	His	Ser	Ala	Leu	Arg	Arg
		35					40					45			
Asp	Lys	Tyr	Val	Ala	Glu	Phe	Leu	Glu	Trp	Ala	Lys	Pro	Phe	Thr	Gln
	50					55					60				
Leu	Val	Lys	Glu	Met	Gln	Leu	His	Arg	Glu	Asp	Phe	Glu	Ile	Ile	Lys
65					70					75					80
Val	Ile	Gly	Arg	Gly	Ala	Phe	Gly	Glu	Val	Ala	Val	Val	Lys	Met	Lys
				85					90					95	
Asn	Thr	Glu	Arg	Ile	Tyr	Ala	Met	Lys	Ile	Leu	Asn	Lys	Trp	Glu	Met
			100					105					110		
Leu	Lys	Arg	Ala	Glu	Thr	Ala	Cys	Phe	Arg	Glu	Glu	Arg	Asp	Val	Leu
		115					120					125			
Val	Asn	Gly	Asp	Cys	Gln	Trp	Ile	Thr	Ala	Leu	His	Tyr	Ala	Phe	Gln
	130					135					140				
Asp	Glu	Asn	His	Leu	Tyr	Leu	Val	Met	Asp	Tyr	Tyr	Val	Gly	Gly	Asp
145					150					155					160
Leu	Leu	Thr	Leu	Leu	Ser	Lys	Phe	Glu	Asp	Lys	Leu	Pro	Glu	Asp	Met
			165						170					175	
Ala	Arg	Phe	Tyr	Ile	Gly	Glu	Met	Val	Leu	Ala	Ile	Asp	Ser	Ile	His
			180					185					190		
Gln	Leu	His	Tyr	Val	His	Arg	Asp	Ile	Lys	Pro	Asp	Asn	Val	Leu	Leu
		195					200					205			
Asp	Val	Asn	Gly	His	Ile	Arg	Leu	Ala	Asp	Phe	Gly	Ser	Cys	Leu	Lys
	210					215					220				
Met	Asn	Asp	Asp	Gly	Thr	Val	Gln	Ser	Ser	Val	Ala	Val	Gly	Thr	Pro

225					230					235				240
Asp	Tyr	Ile	Ser	Pro	Glu	Ile	Leu	Gln	Ala	Met	Glu	Asp	Gly	Met Gly
				245					250					255
Lys	Tyr	Gly	Pro	Glu	Cys	Asp	Trp	Trp	Ser	Leu	Gly	Val	Cys	Met Tyr
			260					265					270	
Glu	Met	Leu	Tyr	Gly	Glu	Thr	Pro	Phe	Tyr	Ala	Glu	Ser	Leu	Val Glu
		275					280					285		
Thr	Tyr	Gly	Lys	Ile	Met	Asn	His	Glu	Glu	Arg	Phe	Gln	Phe	Pro Ser
	290					295				300				
His	Val	Thr	Asp	Val	Ser	Glu	Glu	Ala	Lys	Asp	Leu	Ile	Gln	Arg Leu
305					310					315				320
Ile	Cys	Ser	Arg	Glu	Arg	Arg	Leu	Gly	Gln	Asn	Gly	Ile	Glu	Asp Phe
			325					330						335
Lys	Lys	His	Ala	Phe	Phe	Glu	Gly	Leu	Asn	Trp	Glu	Asn	Ile	Arg Asn
			340					345					350	
Leu	Glu	Ala	Pro	Tyr	Ile	Pro	Asp	Val	Ser	Ser	Pro	Ser	Asp	Thr Ser
		355					360					365		
Asn	Phe	Asp	Val	Asp	Asp	Asp	Val	Leu	Arg	Asn	Thr	Glu	Ile	Leu Pro
	370					375					380			
Pro	Gly	Ser	His	Thr	Gly	Phe	Ser	Gly	Leu	His	Leu	Pro	Phe	Ile Gly
385					390					395				400
Phe	Thr	Phe	Thr	Thr	Glu	Ser	Cys	Phe	Ser	Asp	Arg	Gly	Ser	Leu Lys
			405					410					415	
Ser	Ile	Met	Gln	Ser	Asn	Thr	Leu	Thr	Lys	Asp	Glu	Asp	Val	Gln Arg
			420					425					430	
Asp	Leu	Glu	His	Ser	Leu	Gln	Met	Glu	Ala	Tyr	Glu	Arg	Arg	Ile Arg
		435					440					445		
Arg	Leu	Glu	Gln	Glu	Lys	Leu	Glu	Leu	Ser	Arg	Lys	Leu	Gln	Glu Ser
	450					455					460			
Thr	Gln	Thr	Val	Gln	Ser	Leu	His	Gly	Ser	Ser	Arg	Ala	Leu	Ser Asn
465					470					475				480
Ser	Asn	Arg	Asp	Lys	Glu	Ile	Lys	Lys	Leu	Asn	Glu	Glu	Ile	Glu Arg
			485					490					495	
Leu	Lys	Asn	Lys	Ile	Ala	Asp	Ser	Asn	Arg	Leu	Glu	Arg	Gln	Leu Glu
		500						505					510	
Asp	Thr	Val	Ala	Leu	Arg	Gln	Glu	Arg	Glu	Asp	Ser	Thr	Gln	Arg Leu
		515					520					525		
Arg	Gly	Leu	Glu	Lys	Gln	His	Arg	Val	Val	Arg	Gln	Glu	Lys	Glu Glu
	530					535					540			
Leu	His	Lys	Gln	Leu	Val	Glu	Ala	Ser	Glu	Arg	Leu	Lys	Ser	Gln Ala
545					550					555				560
Lys	Glu	Leu	Lys	Asp	Ala	His	Gln	Gln	Arg	Lys	Leu	Ala	Leu	Gln Glu
			565					570					575	
Phe	Ser	Glu	Leu	Asn	Glu	Arg	Met	Ala	Glu	Leu	Arg	Ala	Gln	Lys Gln
		580						585					590	
Lys	Val	Ser	Arg	Gln	Leu	Arg	Asp	Lys	Glu	Glu	Glu	Met	Glu	Val Ala
		595					600					605		
Thr	Gln	Lys	Val	Asp	Ala	Met	Arg	Gln	Glu	Met	Arg	Arg	Ala	Glu Lys
	610					615					620			
Leu	Arg	Lys	Glu	Leu	Glu	Ala	Gln	Leu	Asp	Asp	Ala	Val	Ala	Glu Ala
625					630					635				640
Ser	Lys	Glu	Arg	Lys	Leu	Arg	Glu	His	Ser	Glu	Asn	Phe	Cys	Lys Gln
			645					650					655	
Met	Glu	Ser	Glu	Leu	Glu	Ala	Leu	Lys	Val	Lys	Gln	Gly	Gly	Arg Gly

660										665					670				
Ala	Gly	Ala	Thr	Leu	Glu	His	Gln	Gln	Glu	Ile	Ser	Lys	Ile	Lys	Ser				
		675						680				685							
Glu	Leu	Glu	Lys	Lys	Val	Leu	Phe	Tyr	Glu	Glu	Glu	Leu	Val	Arg	Arg				
		690				695					700								
Glu	Ala	Ser	His	Val	Leu	Glu	Val	Lys	Asn	Val	Lys	Lys	Glu	Val	His				
705					710				715						720				
Asp	Ser	Glu	Ser	His	Gln	Leu	Ala	Leu	Gln	Lys	Glu	Ile	Leu	Met	Leu				
				725					730						735				
Lys	Asp	Lys	Leu	Glu	Lys	Ser	Lys	Arg	Glu	Arg	His	Asn	Glu	Met	Glu				
			740					745					750						
Glu	Ala	Val	Gly	Thr	Ile	Lys	Asp	Lys	Tyr	Glu	Arg	Glu	Arg	Ala	Met				
		755					760					765							
Leu	Phe	Asp	Glu	Asn	Lys	Lys	Leu	Thr	Ala	Glu	Asn	Glu	Lys	Leu	Cys				
		770				775					780								
Ser	Phe	Val	Asp	Lys	Leu	Thr	Ala	Gln	Asn	Arg	Gln	Leu	Glu	Asp	Glu				
785					790				795						800				
Leu	Gln	Asp	Leu	Ala	Ala	Lys	Lys	Glu	Ser	Val	Ala	His	Trp	Glu	Ala				
				805					810						815				
Gln	Ile	Ala	Glu	Ile	Ile	Gln	Trp	Val	Ser	Asp	Glu	Lys	Asp	Ala	Arg				
			820					825							830				
Gly	Tyr	Leu	Gln	Ala	Leu	Ala	Ser	Lys	Met	Thr	Glu	Glu	Leu	Glu	Ala				
		835					840					845							
Leu	Arg	Ser	Ser	Ser	Leu	Gly	Ser	Arg	Thr	Leu	Asp	Pro	Leu	Trp	Lys				
	850					855					860								
Val	Arg	Arg	Ser	Gln	Lys	Leu	Asp	Met	Ser	Ala	Arg	Leu	Glu	Leu	Gln				
865					870					875					880				
Ser	Ala	Leu	Glu	Ala	Glu	Ile	Arg	Ala	Lys	Gln	Leu	Val	Gln	Glu	Glu				
				885					890						895				
Leu	Arg	Lys	Val	Lys	Asp	Ala	Asn	Leu	Thr	Leu	Glu	Ser	Lys	Leu	Lys				
			900					905					910						
Asp	Ser	Glu	Ala	Lys	Asn	Arg	Glu	Leu	Leu	Glu	Glu	Met	Glu	Ile	Leu				
		915					920						925						
Lys	Lys	Lys	Met	Glu	Glu	Lys	Phe	Arg	Ala	Asp	Thr	Gly	Leu	Lys	Leu				
	930					935					940								
Pro	Asp	Phe	Gln	Asp	Ser	Ile	Phe	Glu	Tyr	Phe	Asn	Thr	Ala	Pro	Leu				
945					950														

1090	1095	1100
Val Asp Val Gln Arg Gly Ile Gly Thr Ala Tyr Lys Gly His Val Lys		
1105	1110	1115
Val Pro Lys Pro Thr Gly Val Lys Lys Gly Trp Gln Arg Ala Tyr Ala		1120
	1125	1130
Val Val Cys Asp Cys Lys Leu Phe Leu Tyr Asp Leu Pro Glu Gly Lys		1135
	1140	1145
Ser Thr Gln Pro Gly Val Ile Ala Ser Gln Val Leu Asp Leu Arg Asp		1150
	1155	1160
Asp Glu Phe Ser Val Ser Ser Val Leu Ala Ser Asp Val Ile His Ala		1165
	1170	1175
Thr Arg Arg Asp Ile Pro Cys Ile Phe Arg Val Thr Ala Ser Leu Leu		1180
1185	1190	1195
Gly Ala Pro Ser Lys Thr Ser Ser Leu Leu Ile Leu Thr Glu Asn Glu		1200
	1205	1210
Asn Glu Lys Arg Lys Trp Val Gly Ile Leu Glu Gly Leu Gln Ser Ile		1215
	1220	1225
Leu His Lys Asn Arg Leu Arg Asn Gln Val Val His Val Pro Leu Glu		1230
	1235	1240
Ala Tyr Asp Ser Ser Leu Pro Leu Ile Lys Ala Ile Leu Thr Ala Ala		1245
	1250	1255
Ile Val Asp Ala Asp Arg Ile Ala Val Gly Leu Glu Glu Gly Leu Tyr		1260
1265	1270	1275
Val Ile Glu Val Thr Arg Asp Val Ile Val Arg Ala Ala Asp Cys Lys		1280
	1285	1290
Lys Val His Gln Ile Glu Leu Ala Pro Arg Glu Lys Ile Val Ile Leu		1295
	1300	1305
Leu Cys Gly Arg Asn His His Val His Leu Tyr Pro Trp Ser Ser Leu		1310
	1315	1320
Asp Gly Ala Glu Gly Ser Phe Asp Ile Lys Leu Pro Glu Thr Lys Gly		1325
	1330	1335
Cys Gln Leu Met Ala Thr Ala Thr Leu Lys Arg Asn Ser Gly Thr Cys		1340
1345	1350	1355
Leu Phe Val Ala Val Lys Arg Leu Ile Leu Cys Tyr Glu Ile Gln Arg		1360
	1365	1370
Thr Lys Pro Phe His Arg Lys Phe Asn Glu Ile Val Ala Pro Gly Ser		1375
	1380	1385
Val Gln Cys Leu Ala Val Leu Arg Asp Arg Leu Cys Val Gly Tyr Pro		1390
	1395	1400
Ser Gly Phe Cys Leu Leu Ser Ile Gln Gly Asp Gly Gln Pro Leu Asn		1405
	1410	1415
Leu Val Asn Pro Asn Asp Pro Ser Leu Ala Phe Leu Ser Gln Gln Ser		1420
1425	1430	1435
Phe Asp Ala Leu Cys Ala Val Glu Leu Glu Ser Glu Glu Tyr Leu Leu		1440
	1445	1450
Cys Phe Ser His Met Gly Leu Tyr Val Asp Pro Gln Gly Arg Arg Ala		1455
	1460	1465
Arg Ala Gln Glu Leu Met Trp Pro Ala Ala Pro Val Ala Cys Ser Cys		1470
	1475	1480
Ser Pro Thr His Val Thr Val Tyr Ser Glu Tyr Gly Val Asp Val Phe		1485
	1490	1495
Asp Val Arg Thr Met Glu Trp Val Gln Thr Ile Gly Leu Arg Arg Ile		1500
1505	1510	1515
Arg Pro Leu Asn Ser Glu Gly Thr Leu Asn Leu Leu Asn Cys Glu Pro		1520

					1525					1530					1535
Pro	Arg	Leu	Ile	Tyr	Phe	Lys	Ser	Lys	Phe	Ser	Gly	Ala	Val	Leu	Asn
			1540						1545				1550		
Val	Pro	Asp	Thr	Ser	Asp	Asn	Ser	Lys	Lys	Gln	Met	Leu	Arg	Thr	Arg
		1555					1560					1565			
Ser	Lys	Arg	Arg	Phe	Val	Phe	Lys	Val	Pro	Glu	Glu	Glu	Arg	Leu	Gln
	1570					1575					1580				
Gln	Arg	Arg	Glu	Met	Leu	Arg	Asp	Pro	Glu	Leu	Arg	Ser	Lys	Met	Ile
1585					1590					1595					1600
Ser	Asn	Pro	Thr	Asn	Phe	Asn	His	Val	Ala	His	Met	Gly	Pro	Gly	Asp
				1605					1610					1615	
Gly	Met	Gln	Val	Leu	Met	Asp	Leu	Pro	Leu	Ser	Ala	Val	Pro	Pro	Ser
			1620					1625				1630			
Gln	Glu	Glu	Arg	Pro	Gly	Pro	Ala	Pro	Thr	Asn	Leu	Ala	Arg	Gln	Pro
	1635						1640				1645				
Pro	Ser	Arg	Asn	Lys	Pro	Tyr	Ile	Ser	Trp	Pro	Ser	Ser	Gly	Gly	Ser
	1650					1655				1660					
Glu	Pro	Ser	Val	Thr	Val	Pro	Leu	Arg	Ser	Met	Ser	Asp	Pro	Asp	Gln
1665					1670					1675					1680
Asp	Phe	Asp	Lys	Glu	Pro	Asp	Ser	Asp	Ser	Thr	Lys	His	Ser	Thr	Pro
				1685					1690					1695	
Ser	Asn	Ser	Ser	Asn	Pro	Ser	Gly	Pro	Pro	Ser	Pro	Asn	Ser	Pro	His
			1700					1705				1710			
Arg	Ser	Gln	Leu	Pro	Leu	Glu	Gly	Leu	Glu	Gln	Pro	Ala	Cys	Asp	Thr
		1715					1720					1725			

```
<210> 3667
<211> 505
<212> DNA
<213> Homo sapiens
```

```

<400> 3667
tgtacattaa tctaaatacc tggatttaca ttgatatttt aatatttgta aatttcatgt
60
taattcccta tgtaacaag ttaataagt catctgtaac agtacaatta agtccatata
120
tgattgtatt tactctttct tccctactca tagtatgcgt tccattttga ggaatcacag
180
atatcgaaga gatgccagaa cactagaaga tgaagaagag atgtggttta acacagatga
240
agatgacatg gaagatggag aagctgtagt gtctccatct gacaaaacta aaaatgatga
300
tgatattatg gatccaataa gttaaattcat ggaaaggaag aaattaaaag aaagtgagga
360
aaaggaagtg cttctgaaaa caaacctttc tggacggcag agcccaagtt tcaagctttc
420
cctgtccagt ggaacgaaga ctaacctcac cagccagtca tctacaacaa atctgcctgg
480
ttctccggga tcacctggat cccca
505

```

```
<210> 3668
<211> 117
<212> PRT
```

<213> Homo sapiens

<400> 3668

```

Met Arg Ser Ile Leu Arg Asn His Arg Tyr Arg Arg Asp Ala Arg Thr
 1           5           10           15
Leu Glu Asp Glu Glu Glu Met Trp Phe Asn Thr Asp Glu Asp Asp Met
           20           25           30
Glu Asp Gly Glu Ala Val Val Ser Pro Ser Asp Lys Thr Lys Asn Asp
           35           40           45
Asp Asp Ile Met Asp Pro Ile Ser Lys Phe Met Glu Arg Lys Lys Leu
           50           55           60
Lys Glu Ser Glu Glu Lys Glu Val Leu Leu Lys Thr Asn Leu Ser Gly
65           70           75           80
Arg Gln Ser Pro Ser Phe Lys Leu Ser Leu Ser Ser Gly Thr Lys Thr
           85           90           95
Asn Leu Thr Ser Gln Ser Ser Thr Thr Asn Leu Pro Gly Ser Pro Gly
           100          105          110
Ser Pro Gly Ser Pro
           115

```

<210> 3669

<211> 1226

<212> DNA

<213> Homo sapiens

<400> 3669

```

cttgactccc agcattctca tctcaccttg ccatactata agatgtcttg tttgtctatg
60
gctgagggttc tggcccgac ggactggaca gtagaggatg gattacagaa atacgagaga
120
ggattaatct tttacattaa tcattcactt tatgaaaacc tggatgaaga attaaatgaa
180
gaattagcag caaaagtggg tcagatgttt tatgtggctg agccaaagca agtgcccat
240
attctctgta gtccttctat gaagaatatt aatcctttaa ctgccatgag ctatctaagg
300
aagatggata cttctggggt ttcattccatc ttagtgacac tgagcaaggc agcagtggca
360
ctgaaaatgg gagatcttga cgtgtacaga aatgaaatga aaagccatcc agagatgaag
420
ttgggtgtgtg gcttcatttt ggaaccacgc ctgttgattc aacacaggaa gggacagatt
480
gttccaactg agcttgcgac tcacttgaag gagactcagc caggattgct tgtggcttca
540
gtcctgggat tgcagaagaa cagcaaaatt gggattgaag aagcagattc tttctttaag
600
gtgctttgtg gtaaggatga agataccatc cctcagctct tgatagactt ttgggaagct
660
cagctagtgg catgtctccc agatgtggta cttcaggaac tctttttcaa actcacatca
720
cagtacatct ggagattgtc taagaggcag cctcctgaca ccacaccatt gcgaacatcg
780
gaggatctga taaatgcctg tagtcattat ggcttaattt atccatgggt tcacgtcgta
840

```


atatcatctg attcttttagc tgataaaaat tatacagaag atcttttcaaa attacagtct
 900
 cttatatgtg gtccttcatt tgacatagct tccattattc cgttcttgga gccactttca
 960
 gaagacacta ttgccggcct cagtgtccat gttctgtgtc gtacacgctt gaaagagtat
 1020
 gaacagtgca tagacatact gtttagagaga tgcccggagg cagtcattcc atatgcta
 1080
 catgaactga aagaagagaa cgggactctg tgggtggaaaa aactgttgcc tgaactttgt
 1140
 cagagaataa aatgtggtgg agagaagtat caactctacc tgtcatcatt aaaagcttaa
 1200
 ttttcacggg aactgtggaa gctagc
 1226

<210> 3670

<211> 385

<212> PRT

<213> Homo sapiens

<400> 3670

Met	Ser	Gly	Leu	Ser	Met	Ala	Glu	Val	Leu	Ala	Arg	Thr	Asp	Trp	Thr
1				5					10					15	
Val	Glu	Asp	Gly	Leu	Gln	Lys	Tyr	Glu	Arg	Gly	Leu	Ile	Phe	Tyr	Ile
			20					25					30		
Asn	His	Ser	Leu	Tyr	Glu	Asn	Leu	Asp	Glu	Glu	Leu	Asn	Glu	Glu	Leu
		35					40					45			
Ala	Ala	Lys	Val	Val	Gln	Met	Phe	Tyr	Val	Ala	Glu	Pro	Lys	Gln	Val
	50					55				60					
Pro	His	Ile	Leu	Cys	Ser	Pro	Ser	Met	Lys	Asn	Ile	Asn	Pro	Leu	Thr
65					70					75				80	
Ala	Met	Ser	Tyr	Leu	Arg	Lys	Met	Asp	Thr	Ser	Gly	Phe	Ser	Ser	Ile
				85					90					95	
Leu	Val	Thr	Leu	Ser	Lys	Ala	Ala	Val	Ala	Leu	Lys	Met	Gly	Asp	Leu
			100					105					110		
Asp	Val	Tyr	Arg	Asn	Glu	Met	Lys	Ser	His	Pro	Glu	Met	Lys	Leu	Val
		115					120					125			
Cys	Gly	Phe	Ile	Leu	Glu	Pro	Arg	Leu	Leu	Ile	Gln	His	Arg	Lys	Gly
	130						135				140				
Gln	Ile	Val	Pro	Thr	Glu	Leu	Ala	Thr	His	Leu	Lys	Glu	Thr	Gln	Pro
145					150					155				160	
Gly	Leu	Leu	Val	Ala	Ser	Val	Leu	Gly	Leu	Gln	Lys	Asn	Ser	Lys	Ile
			165						170					175	
Gly	Ile	Glu	Glu	Ala	Asp	Ser	Phe	Phe	Lys	Val	Leu	Cys	Gly	Lys	Asp
			180					185					190		
Glu	Asp	Thr	Ile	Pro	Gln	Leu	Leu	Ile	Asp	Phe	Trp	Glu	Ala	Gln	Leu
	195						200					205			
Val	Ala	Cys	Leu	Pro	Asp	Val	Val	Leu	Gln	Glu	Leu	Phe	Phe	Lys	Leu
	210					215						220			
Thr	Ser	Gln	Tyr	Ile	Trp	Arg	Leu	Ser	Lys	Arg	Gln	Pro	Pro	Asp	Thr
225					230					235				240	
Thr	Pro	Leu	Arg	Thr	Ser	Glu	Asp	Leu	Ile	Asn	Ala	Cys	Ser	His	Tyr
			245					250						255	
Gly	Leu	Ile	Tyr	Pro	Trp	Val	His	Val	Val	Ile	Ser	Ser	Asp	Ser	Leu

	260		265		270										
Ala	Asp	Lys	Asn	Tyr	Thr	Glu	Asp	Leu	Ser	Lys	Leu	Gln	Ser	Leu	Ile
	275		280		285										
Cys	Gly	Pro	Ser	Phe	Asp	Ile	Ala	Ser	Ile	Ile	Pro	Phe	Leu	Glu	Pro
	290		295		300										
Leu	Ser	Glu	Asp	Thr	Ile	Ala	Gly	Leu	Ser	Val	His	Val	Leu	Cys	Arg
305			310		315										320
Thr	Arg	Leu	Lys	Glu	Tyr	Glu	Gln	Cys	Ile	Asp	Ile	Leu	Leu	Glu	Arg
			325		330										335
Cys	Pro	Glu	Ala	Val	Ile	Pro	Tyr	Ala	Asn	His	Glu	Leu	Lys	Glu	Glu
			340		345										350
Asn	Arg	Thr	Leu	Trp	Trp	Lys	Lys	Leu	Leu	Pro	Glu	Leu	Cys	Gln	Arg
			355		360										
Ile	Lys	Cys	Gly	Gly	Glu	Lys	Tyr	Gln	Leu	Tyr	Leu	Ser	Ser	Leu	Lys
	370				375						380				
Ala															
385															

<210> 3671

<211> 828

<212> DNA

<213> Homo sapiens

<400> 3671

```

nntacagcta agattcattt catacgtttg atgcttagct gaaaaattac aataaattct
60
ccaatgaaat tatgtatctt tatttaatga aaatgcctgc tgcgtaccaa ggtatgtact
120
agggcatctg gggtaagtaa aaacaaacac atagagcctg cctggagaag ctcatggctc
180
gatggaaaga taagcaagaa gagttaattt ctaatcaata tgataaaaag gtcagagagc
240
agtttctgaa aaacatgttt ttgagttgag tcctgaaaga caaggagatg ttagtaaagc
300
agagaaggga gaattcattc tagaaagatc agacaatgtg tgggaagggc agagtctgaa
360
aagagcatgc cccatttgga gaagcatcaa gaagcccacg cgtagaagc accggcccca
420
tgagacaaag acacagctag agagattgac taggcatgt cggaatgtcc tcttatttta
480
tacatacata agcatataga tacatatagc caaagttacc tttttaatga tcttttttac
540
ccagtgtatt ctggaggtcg aatggtcaca tatgaacatc tccgagaggt tgtgtttggc
600
aaaagtgaag atgagcatta tcccctttgg aaatcagtca ttggagggat gatggctggt
660
gttattggcc agtttttagc caatccaact gacctagtga aggttcagat gcaaattgaa
720
ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca tgcatttgca
780
aaaatcttag ctgaaggagg aatacgaggg ctttgggcag gctgggta
828

```

<210> 3672

<211> 124
 <212> PRT
 <213> Homo sapiens

<400> 3672

```

Met Ser Glu Cys Pro Leu Ile Leu Tyr Ile His Lys His Ile Asp Thr
 1           5           10          15
Tyr Ser Gln Ser Tyr Leu Phe Asn Asp Leu Phe Tyr Pro Val Tyr Ser
          20          25          30
Gly Gly Arg Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly
          35          40          45
Lys Ser Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly
          50          55          60
Met Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
65          70          75          80
Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly Lys
          85          90          95
Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile Leu Ala
          100         105         110
Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val
          115          120

```

<210> 3673
 <211> 1052
 <212> DNA
 <213> Homo sapiens

<400> 3673

```

nagatctcaa aatctggact tgaaaagaat tccttgatct atgaactttt ctctgttatg
60
gttcattctg ggagcgtgc tgggtggtcat tattatgcat gtataaagtc attcagtgt
120
gagcagtggt acagcttcaa tgatcaacat gtcagcagga taacacaaga ggacattaag
180
aaaacacatg gtggatcttc aggaagcaga ggatattatt ctagtgcttt cgcaagttcc
240
acaaatgcat atatgctgat ctatagactg aaggatccag ccagaaatgc aaaatttcta
300
gaagtggatg aatacccaga acatattaaa aacttgggtgc agaaagagag agagttggaa
360
gaacaagaaa agagacaacg agaaattgag cgcaatacat gcaagataaa attattctgt
420
ttgcatccta caaaacaagt aatgatggaa aataaattgg aggttcataa ggataagaca
480
ttaaaggaag cagtagaaat ggcttataag atgatggatt tagaagaggt aatacccctg
540
gattgctgtc gccttggttaa atatgatgag tttcatgatt atctagaacg gtcatatgaa
600
ggagaagaag atacaccaat ggggcttcta ctaggtggcg tcaagtcaac atatatgttt
660
gatctgctgt tggagacgag aaagcctgat caggttttcc aatcttataa acctggaggg
720
gagccatttt acaccatttt tagttggtct gtacttagaa ttttcctgag aaaggttttt
780

```

tttttattgt agcaatgaac ataatttaca ttttgtatat ggtcttaca tgtagaataa
 840
 ttttgacagg ttgagaagta ctcagcacca gcttggaatt aagttctaga ttacttgcaa
 900
 agagtttgtgt acataatttt aaaaacaaca aaaaacaaca aagcttctag cttacgggtct
 960
 tcagtggggtt ttttcttctc cagtgggcgg tactgaatca ttctggatgc tgtcaatccc
 1020
 taaagttatc aattgctctc ttaggaagat ct
 1052

<210> 3674

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3674

Xaa	Ile	Ser	Lys	Ser	Gly	Leu	Glu	Lys	Asn	Ser	Leu	Ile	Tyr	Glu	Leu
1			5					10						15	
Phe	Ser	Val	Met	Val	His	Ser	Gly	Ser	Ala	Ala	Gly	Gly	His	Tyr	Tyr
		20					25					30			
Ala	Cys	Ile	Lys	Ser	Phe	Ser	Asp	Glu	Gln	Trp	Tyr	Ser	Phe	Asn	Asp
	35					40					45				
Gln	His	Val	Ser	Arg	Ile	Thr	Gln	Glu	Asp	Ile	Lys	Lys	Thr	His	Gly
	50				55					60					
Gly	Ser	Ser	Gly	Ser	Arg	Gly	Tyr	Tyr	Ser	Ser	Ala	Phe	Ala	Ser	Ser
65				70					75					80	
Thr	Asn	Ala	Tyr	Met	Leu	Ile	Tyr	Arg	Leu	Lys	Asp	Pro	Ala	Arg	Asn
		85					90					95			
Ala	Lys	Phe	Leu	Glu	Val	Asp	Glu	Tyr	Pro	Glu	His	Ile	Lys	Asn	Leu
		100					105					110			
Val	Gln	Lys	Glu	Arg	Glu	Leu	Glu	Glu	Gln	Glu	Lys	Arg	Gln	Arg	Glu
	115					120					125				
Ile	Glu	Arg	Asn	Thr	Cys	Lys	Ile	Lys	Leu	Phe	Cys	Leu	His	Pro	Thr
	130				135						140				
Lys	Gln	Val	Met	Met	Glu	Asn	Lys	Leu	Glu	Val	His	Lys	Asp	Lys	Thr
145				150					155					160	
Leu	Lys	Glu	Ala	Val	Glu	Met	Ala	Tyr	Lys	Met	Met	Asp	Leu	Glu	Glu
		165					170					175			
Val	Ile	Pro	Leu	Asp	Cys	Cys	Arg	Leu	Val	Lys	Tyr	Asp	Glu	Phe	His
	180						185					190			
Asp	Tyr	Leu	Glu	Arg	Ser	Tyr	Glu	Gly	Glu	Glu	Asp	Thr	Pro	Met	Gly
	195					200					205				
Leu	Leu	Leu	Gly	Gly	Val	Lys	Ser	Thr	Tyr	Met	Phe	Asp	Leu	Leu	Leu
	210				215						220				
Glu	Thr	Arg	Lys	Pro	Asp	Gln	Val	Phe	Gln	Ser	Tyr	Lys	Pro	Gly	Gly
225				230						235				240	
Glu	Pro	Phe	Tyr	Thr	Ile	Phe	Ser	Trp	Ser	Val	Leu	Arg	Ile	Phe	Leu
		245					250						255		
Arg	Lys	Val	Phe	Phe	Leu	Leu									
		260													

<210> 3675

<211> 837

<212> DNA

<213> Homo sapiens

<400> 3675

```

nntccggaga tgtgaagaag gggggcgagc ggacaggaag atgaagggag caaagctgcc
60
cgcccgggga caggcgtcta ggtgaacaag aaaatgaccg aagaaacaca cccagacgat
120
gacagctata ttgtgcgtgt caaggctgtg gttatgacca gagatgactc cagcggggga
180
tggttccccac aggaaggagg cgggatcagt cgcgtcgggg tctgtaaggt catgcacccc
240
gaaggcaatg gacgaagcgg ctttctcatc catggtgaac gacagaaaga caaactggtg
300
gtattggaat gctatgtaag aaaggacttg gtctacacca aagccaatcc aacgtttcat
360
cactggaagg tcgataatag gaagtttggg cttactttcc aaagccctgc tgatgccgga
420
gcctttgaca ggggagtaag gaaagcaatc gaagacctta tagaagaagt agaaaatgat
480
tctggcgggc ccagaaggct cctggcctac ccactgtcct cctgtaatca gaggcccagg
540
gtgtacagct gccactgaaa aggaaaggga tctgtgacct ctggagccct ggttcggttt
600
aggccttggt ctatgggtaa gtgagtagta ggcatttgtt tacatctgat cgtggcctgg
660
agggcccttg ggcagtcagt tctcatggtg ggcttgacta ggtccacag atgcaaacac
720
aaaaattctc cactgcagca catccaggta tcaaatacaga gggttaaaga agccatagac
780
agggccctgt gaagaaagaa atatcaagca aggcattgta ataccaaatt cagatct
837

```

<210> 3676

<211> 154

<212> PRT

<213> Homo sapiens

<400> 3676

```

Met Thr Glu Glu Thr His Pro Asp Asp Asp Ser Tyr Ile Val Arg Val
 1          5          10          15
Lys Ala Val Val Met Thr Arg Asp Asp Ser Ser Gly Gly Trp Phe Pro
          20          25          30
Gln Glu Gly Gly Gly Ile Ser Arg Val Gly Val Cys Lys Val Met His
          35          40          45
Pro Glu Gly Asn Gly Arg Ser Gly Phe Leu Ile His Gly Glu Arg Gln
          50          55          60
Lys Asp Lys Leu Val Val Leu Glu Cys Tyr Val Arg Lys Asp Leu Val
          65          70          75          80
Tyr Thr Lys Ala Asn Pro Thr Phe His His Trp Lys Val Asp Asn Arg
          85          90          95
Lys Phe Gly Leu Thr Phe Gln Ser Pro Ala Asp Ala Arg Ala Phe Asp
          100          105          110
Arg Gly Val Arg Lys Ala Ile Glu Asp Leu Ile Glu Glu Val Glu Asn

```

115 120 125
 Asp Ser Gly Gly Pro Arg Arg Leu Leu Ala Tyr Pro Leu Ser Ser Cys
 130 135 140
 Asn Gln Arg Pro Arg Val Tyr Ser Cys His
 145 150

<210> 3677
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 3677
 nnggaagaag gcccttctca aaatggactg gtgttgcagg gtgagaagct gccccctgac
 60
 ttcatgccaa agctcgtaa gaatctcta ggcgagatgc ctctgtgggt ctgccagagt
 120
 tgccgaaaga gcatggagga agatgaaagg cagacaggtc gagaacatgc agtggcgatc
 180
 tccttgtcac acacatcctg caaatcacag tcttgtggag atgactctca ttcgtcctcg
 240
 tcttctctct catcatcctc atcctcgtec tctcttctct gccctgggaa ctcgggagac
 300
 tgggactcta gtcggttctt gtcggcacat aagctctcgg gcctctggaa tccccacat
 360
 tccagtgggg ccatgccagg cagctctctt gggagtcctc ctaccatccc tggcgcgc
 418

<210> 3678
 <211> 139
 <212> PRT
 <213> Homo sapiens

<400> 3678
 Xaa Glu Glu Gly Pro Ser Gln Asn Gly Leu Val Leu Gln Gly Glu Lys
 1 5 10 15
 Leu Pro Pro Asp Phe Met Pro Lys Leu Val Lys Asn Leu Leu Gly Glu
 20 25 30
 Met Pro Leu Trp Val Cys Gln Ser Cys Arg Lys Ser Met Glu Glu Asp
 35 40 45
 Glu Arg Gln Thr Gly Arg Glu His Ala Val Ala Ile Ser Leu Ser His
 50 55 60
 Thr Ser Cys Lys Ser Gln Ser Cys Gly Asp Asp Ser His Ser Ser Ser
 65 70 75 80
 Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Cys Pro Gly
 85 90 95
 Asn Ser Gly Asp Trp Asp Pro Ser Ser Phe Leu Ser Ala His Lys Leu
 100 105 110
 Ser Gly Leu Trp Asn Ser Pro His Ser Ser Gly Ala Met Pro Gly Ser
 115 120 125
 Ser Leu Gly Ser Pro Pro Thr Ile Pro Gly Ala
 130 135

<210> 3679
 <211> 567

<212> DNA

<213> Homo sapiens

<400> 3679

cgcgtagagg gctatgacct ggagttaagt atggcgctgg ggacatacta cccacctccc
 60
 cgcctcaggc agctgctccc catgcttctt cagggaaaca gtatcttcac tgcccctaag
 120
 gagatcgag agatcaaggc ccagctggag acagccctga agtggaggaa ctatgaggtg
 180
 aagctgcggc tgctgctgca cctggaggaa ctgcagatgg agcatgatat ccggcactat
 240
 gacctggagt cggtgcccat gacctgggac cctgtggacc agaaccacag gctgctcacg
 300
 ctggagggtt ctggagtgc tgagagccgc ccctcagtgc tacggggcga ccacctgttt
 360
 gcccttttgt cctcggagac acaccaggag gaccccatca catataaggg ctttgtgcac
 420
 aaggtggaat tggaccgtgt caagctgagc ttttccatga gcctcctgag ccgctttgtg
 480
 gatgggctga ctttaaggt gaactttacc ttcaaccgcc agccgctgcg agtccagcac
 540
 cgtgcctggg agttgacagg gcgctgg
 567

<210> 3680

<211> 189

<212> PRT

<213> Homo sapiens

<400> 3680

Arg Val Lys Gly Tyr Asp Leu Glu Leu Ser Met Ala Leu Gly Thr Tyr
 1 5 10 15
 Tyr Pro Pro Pro Arg Leu Arg Gln Leu Leu Pro Met Leu Leu Gln Gly
 20 25 30
 Thr Ser Ile Phe Thr Ala Pro Lys Glu Ile Ala Glu Ile Lys Ala Gln
 35 40 45
 Leu Glu Thr Ala Leu Lys Trp Arg Asn Tyr Glu Val Lys Leu Arg Leu
 50 55 60
 Leu Leu His Leu Glu Glu Leu Gln Met Glu His Asp Ile Arg His Tyr
 65 70 75 80
 Asp Leu Glu Ser Val Pro Met Thr Trp Asp Pro Val Asp Gln Asn Pro
 85 90 95
 Arg Leu Leu Thr Leu Glu Val Pro Gly Val Thr Glu Ser Arg Pro Ser
 100 105 110
 Val Leu Arg Gly Asp His Leu Phe Ala Leu Leu Ser Ser Glu Thr His
 115 120 125
 Gln Glu Asp Pro Ile Thr Tyr Lys Gly Phe Val His Lys Val Glu Leu
 130 135 140
 Asp Arg Val Lys Leu Ser Phe Ser Met Ser Leu Leu Ser Arg Phe Val
 145 150 155 160
 Asp Gly Leu Thr Phe Lys Val Asn Phe Thr Phe Asn Arg Gln Pro Leu
 165 170 175
 Arg Val Gln His Arg Ala Trp Glu Leu Thr Gly Arg Trp

180

185

<210> 3681
 <211> 788
 <212> DNA
 <213> Homo sapiens

<400> 3681
 nntgggcagt gtactcgggc ctccccgaca gcagctcctg tggggagcgc tcaccaccac
 60
 ccccgccctcc acttccttcg gatgaggccc tgctgcaactg tgtcctggaa ggaaagctcc
 120
 gagaccggga ggcagagctt cagcagctgc gggacagcct ggggctgagc atggagcagc
 180
 gcgggcggagg tcgcctgcga ggccgctggc caggcctgag cctctgccac catggccatt
 240
 gtgcagactc tgccagtgcc actggagcct gctcctgaag ctgccactgc cccacaagct
 300
 ccagtcatgg gtagtgtgag cagccttacc tcaggccggc cctgtcccgg ggggccaagt
 360
 cctccccgcc accacggccc tcctgggccc accttcttcc gccagcagga tggcctgcta
 420
 cggggtggct atgaggcaca ggagccgctg tgcccagctg tgccccctag gaaggctgtc
 480
 cctgtcacca gcttcaccta catcaatgag gacttccgga cagagtcacc cccagccca
 540
 agcagtgatg ttgaggatgc ccgagagcag cgggcacaca atgccacact ccgcgggcca
 600
 ccaccaaagc tcatccctgt ctctggaaag ctggagaaga acatagagaa gatcctgatc
 660
 cgcccaacag ccttcaagcc agtgctgccc aaacctcgag gggctccgtc cctgcctagc
 720
 ttcatgggtc ctcgggccac cgggctgtct gggagccagg gcagcctgac gcagctgttt
 780
 ggggggcc
 788

<210> 3682
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 3682
 Met Ala Ile Val Gln Thr Leu Pro Val Pro Leu Glu Pro Ala Pro Glu
 1 5 10 15
 Ala Ala Thr Ala Pro Gln Ala Pro Val Met Gly Ser Val Ser Ser Leu
 20 25 30
 Ile Ser Gly Arg Pro Cys Pro Gly Gly Pro Ala Pro Pro Arg His His
 35 40 45
 Gly Pro Pro Gly Pro Thr Phe Arg Gln Gln Asp Gly Leu Leu Arg
 50 55 60
 Gly Gly Tyr Glu Ala Gln Glu Pro Leu Cys Pro Ala Val Pro Pro Arg
 65 70 75 80
 Lys Ala Val Pro Val Thr Ser Phe Thr Tyr Ile Asn Glu Asp Phe Arg

				85					90					95	
Thr	Glu	Ser	Pro	Pro	Ser	Pro	Ser	Ser	Asp	Val	Glu	Asp	Ala	Arg	Glu
			100					105					110		
Gln	Arg	Ala	His	Asn	Ala	His	Leu	Arg	Gly	Pro	Pro	Pro	Lys	Leu	Ile
		115					120					125			
Pro	Val	Ser	Gly	Lys	Leu	Glu	Lys	Asn	Ile	Glu	Lys	Ile	Leu	Ile	Arg
	130					135					140				
Pro	Thr	Ala	Phe	Lys	Pro	Val	Leu	Pro	Lys	Pro	Arg	Gly	Ala	Pro	Ser
145				150						155					160
Leu	Pro	Ser	Phe	Met	Gly	Pro	Arg	Ala	Thr	Gly	Leu	Ser	Gly	Ser	Gln
			165						170					175	
Gly	Ser	Leu	Thr	Gln	Leu	Phe	Gly	Gly							
			180				185								

<210> 3683

<211> 4421

<212> DNA

<213> Homo sapiens

<400> 3683

[illegible]

gccagccagc agtccaagat ctccggctac agcacagagc actcgactc ctccagcctc
1080
tcagacctga cgcaccgccg caacacgtcc accagcagca gcgcctctgg gggccttggc
1140
atgaccgtgg agggccctga gggcagtgag cgggagcacc ggcccccgga gaagccgccg
1200
cggccacccc ggccccctgca tctgtccgat cgctctttca ggcggaagaa ggactcgggtg
1260
gagagccacc cgacctgggt ggacgacacg cggatcgatg cggatgccat cgtggagaag
1320
atcgtgcaga gccaggactt cacagatggc agcaacaccg aggacagcaa cctccggctg
1380
ttcgtgagcc gcgatggctc tgccacgtcg agcggcatcc agcttgccac cagggtctct
1440
tctgggtctc acgagccagt tgtgattgaa agccattgag gagcaggtgt ccgggctgga
1500
gaagagtcc tcttctctg gagtccagac ctgtatcatt ccatgaggaa ctttccctt
1560
cagatcacct ctgcgccaca tctcatccat gcctcctcca tgactccag tccacactcc
1620
ccgtagcatc attccattgc cctcccatc catgctggga ccctcctggc ccaccaaggc
1680
ccaggcacca ctgtgaatat tctcctctga accactagag ggcaggccag gcaggccagg
1740
cgggccctg cagcttgtgg gcaagaagga gctggcaagg accggcgctg ctggagactg
1800
accagccct ctggtgagg acatgcagca gctcctaaat gtagagatgc ctgtggctga
1860
gggggcctct ctacctgtgt cccactcac tccaggagca ctggctttgg tcacgtctta
1920
gcagcagggc cttgctccgt tgttcccttg ccctgggtgg gggggggcca gaccgcctcc
1980
ggaatcctgc cacctgtgac tgtctgactg cttagtgtt cagctgtccc ttccttgtgt
2040
cctgggggac ctgctggcgg cctcttccctg ggagccatga cctcagaccc caccacact
2100
ccagatcgag acccctgcct cccccggca aatgtectcc cgctgccttg cagcctgcac
2160
tttgacatg ctcaccccca gcacagtcct actggccctt cacctccctt tccctgagct
2220
ccttcccaag gactcctggt cactgcctgc tgtgcagtca gaggccagg gtccagcagc
2280
ccggcgggaa cgggtgctgc ctcttccctc agttagctcc agctcaggtc tgagaccctg
2340
gctgagaaaag gtctgagcac cgaccgtgcc ctctgccag ggtgggtcc tgagcagctg
2400
gttttccctgc aggaagggtg gagcaagcaa agtccttctc tgcctcagg gtcagctgcc
2460
cagactgggg cggatgccag agaggcaggt gggctgtggc tggactggtc cggagctggc
2520
ttccttacca gaaaagcctc agccttccctc tggaagcatc cccgcttctg ggcaaggggg
2580
aagggtccct ttaaggggtg tgctttccca gtggggagca gtctggccct gcccctact
2640

aaagcctctg ctctcagcac tttcccccaa gtccttgtaa cttgcttgaa ggtgggttct
2700
ggctgccagc cagtccctgg acaaactctc ctgccccttt taaatttcac tcatttttga
2760
taaaccagc aggtcgtgtg ttacttagcc ctgtagcttt tttcattttt tctttccgtc
2820
tttcttcttg agttcacggt tcaatattgc ctctcgcgcc tggtagaggg aggtgctgct
2880
tttctgcgcc acctgccggc tggttccagc agcgtcgggg ccagctggg gggccgggat
2940
gggggcttct ctctctggga ggggtgcagg tgcctcccc aggtcgggag ggttccttcc
3000
ctagctcccc atctgcccc gctggtgaga gttgggcttc ttggtcttgg aactccctgg
3060
cattgggaac agagcatttc cagcatttgt tgttggtgtt ttactcacct aacccttaga
3120
aatgaatgt tagaaggtgc ctgccgaggc gggacagagt gtttgctcgc gctggagaag
3180
gctctgctca gccctgagag tcccttcctg cccaccgat actggcactt taaaaaggaa
3240
gctgaccgca cagtgtccag acgaattggc cccagaaga tggggagtcc tgtcctgccc
3300
ttctgtgtct gcgtgacctc acccagccta ggaggagggt gcattcaggg tagatttgcc
3360
tctcattcaa agttctgggg ctttgggcgg aaaacagcca gctttggcgc tgttggggag
3420
actcctccag accaggaacc ccagaaggag acagagcctg ccacatcctc ccagccagg
3480
ccctgggcca gggtgattgg actgagaatt tggccacaac caaattgatg ctggctggaa
3540
ccagaggcca gaaagcctgg ccttgctccc atgtgggagc cctgtcctca gccctcttgt
3600
ccccttgagc tcagtgaatt ccaccagggt gcccacagct cctggacttc aaattctata
3660
tattgagaga gttggagagt atatcagaga tatttttggg aaggagtgg tctatgcaat
3720
gtcagtttgg aatcttcttg aaagttaat gtttttatta ggagatttaa agaaaataaa
3780
ggtctacaat atctttagggt tttttttttt tctgttttac cgcacaaact gaccacatgg
3840
catgtctatc aggatggagg gtgtccatgt tctcctctgt ctttagggag gtgataagga
3900
gatgggcgga ggggtgtttt tttctttgac tcccctcctt tctaacagaa tgttgccacc
3960
actgcttgag tgggctgtgt ttgttctct gtcccagctt cttgttactt tatcatattg
4020
actttagggt caaaggcaac atcagaagaa gtcagatatg tatagtgaca ttccaggggt
4080
ggggaagggt tagggatcca gggttctccc ggtcttggcc acaggcacia tcatcacctt
4140
catcgttcca gattcctggg gagaaaactg agaagatcgt tacctgccag cctcatacgg
4200
agcaaaagct ctgtcctcag ggccaagttc taaccactgc tctgtagacc ttctctgcaa
4260

tcaagtggcc tctaaggagc atgcctgagg acaaataact gtgcctcagt ttcctcacct
 4320
 gcagatgggg ttatcaaata acacgagtgt gcagcctgac ctgcaggagg tgtgagtgtg
 4380
 ttcccaaact aaagccccag gctgccatca tttacaggct a
 4421

<210> 3684

<211> 384

<212> PRT

<213> Homo sapiens

<400> 3684

Met	Ala	Phe	Leu	Met	Lys	Lys	Lys	Lys	Phe	Lys	Phe	Gln	Thr	Thr	Phe
1				5					10					15	
Thr	Leu	Glu	Glu	Leu	Thr	Ala	Val	Pro	Phe	Val	Asn	Gly	Val	Leu	Phe
			20					25					30		
Cys	Lys	Val	Arg	Leu	Leu	Asp	Gly	Gly	Asp	Phe	Val	Ser	Leu	Ser	Ser
		35					40					45			
Arg	Glu	Glu	Val	Gln	Glu	Asn	Cys	Val	Arg	Trp	Arg	Lys	Arg	Phe	Thr
	50					55					60				
Phe	Val	Cys	Lys	Met	Ser	Ala	Asn	Pro	Ala	Thr	Gly	Leu	Leu	Asp	Pro
65					70					75				80	
Cys	Val	Phe	Arg	Val	Ser	Val	Arg	Lys	Glu	Leu	Lys	Gly	Gly	Lys	Ala
				85						90				95	
Tyr	Ser	Lys	Leu	Gly	Phe	Ala	Asp	Leu	Asn	Leu	Ala	Glu	Phe	Ala	Gly
			100					105					110		
Ser	Gly	Ser	Thr	Val	Arg	Cys	Cys	Leu	Leu	Glu	Gly	Tyr	Asp	Thr	Lys
		115					120					125			
Asn	Thr	Arg	Gln	Asp	Asn	Ser	Ile	Leu	Lys	Val	Thr	Ile	Gly	Met	Phe
	130						135					140			
Leu	Leu	Ser	Gly	Asp	Pro	Cys	Phe	Lys	Thr	Pro	Pro	Ser	Thr	Ala	Lys
145					150					155				160	
Ser	Ile	Ser	Ile	Pro	Gly	Gln	Asp	Ser	Ser	Leu	Gln	Leu	Thr	Cys	Lys
				165					170					175	
Gly	Gly	Gly	Thr	Ser	Ser	Gly	Gly	Ser	Ser	Thr	Asn	Ser	Leu	Thr	Gly
			180					185					190		
Ser	Arg	Pro	Pro	Lys	Ala	Arg	Pro	Thr	Ile	Leu	Ser	Ser	Gly	Leu	Pro
		195					200					205			
Glu	Glu	Pro	Asp	Gln	Asn	Leu	Ser	Ser	Pro	Glu	Glu	Val	Phe	His	Ser
	210					215					220				
Gly	His	Ser	Arg	Asn	Ser	Ser	Tyr	Ala	Ser	Gln	Gln	Ser	Lys	Ile	Ser
225					230					235				240	
Gly	Tyr	Ser	Thr	Glu	His	Ser	His	Ser	Ser	Ser	Leu	Ser	Asp	Leu	Thr
				245					250					255	
His	Arg	Arg	Asn	Thr	Ser	Thr	Ser	Ser	Ser	Ala	Ser	Gly	Gly	Leu	Gly
			260					265					270		
Met	Thr	Val	Glu	Gly	Pro	Glu	Gly	Ser	Glu	Arg	Glu	His	Arg	Pro	Pro
		275					280					285			
Glu	Lys	Pro	Pro	Arg	Pro	Pro	Arg	Pro	Leu	His	Leu	Ser	Asp	Arg	Ser
		290				295					300				
Phe	Arg	Arg	Lys	Lys	Asp	Ser	Val	Glu	Ser	His	Pro	Thr	Trp	Val	Asp
305					310					315				320	
Asp	Thr	Arg	Ile	Asp	Ala	Asp	Ala	Ile	Val	Glu	Lys	Ile	Val	Gln	Ser

				325						330					335
Gln	Asp	Phe	Thr	Asp	Gly	Ser	Asn	Thr	Glu	Asp	Ser	Asn	Leu	Arg	Leu
				340					345				350		
Phe	Val	Ser	Arg	Asp	Gly	Ser	Ala	Thr	Leu	Ser	Gly	Ile	Gln	Leu	Ala
		355					360					365			
Thr	Arg	Val	Ser	Ser	Gly	Val	Tyr	Glu	Pro	Val	Val	Ile	Glu	Ser	His
		370				375						380			

<210> 3685

<211> 1293

<212> DNA

<213> Homo sapiens

<400> 3685

```

tccatgcagc gatcccccttg gccagaagaa ggtccattca ttcagttggg gggttcatct
60
cagacaacct cccgtcatca ccccttgagt gagacctaa ccttcaccgc agccttcgag
120
gtgccgtggg ctggtggggc cctcctgct cctctgtggc tctccccgcc gccattctga
180
tactggcgtc cccaatctcc ttgagaaacc attttctcta ctctgatgtc ttttcagaag
240
tcacatcctg ttctggggat gcacccctgc tctccagcc ccacccaaac tgacttaaca
300
cccaccaccc ttcccaggtc agcccaaag ccacttcccc caggaagctc tccctgatgc
360
tgccctggat ggaatgagtc agacctgctg ttgtggggcc ctggccgcgc ctagatacac
420
ttctagggtc tatactcgag tatccagggt atctagggtc tatactcgag tatccagggt
480
accacactgc tgaagttggc ttctcctgat caggcatcaa ctctgggact gcgtttgccg
540
attctgttcc ctaacgcagc cgcagggggc agcacgctgc ctggcacgtc atgggggctc
600
ctccatgttg ggtggatatg cgaacggctt cctgagaaag tgcaggatgt aaaggaacgc
660
ggaggggtgg ggcggcgtgg agggcagagg caaggcacac ggcgaggact gcgttggggc
720
ggcctgtggt ctgtttcaca gcagacaggg aatagcagca gcctgcagtg tgctccagaa
780
gacagtgggg aaggggcctg gctgacatct cgccaccgg tcagcctgta tcctccttcc
840
cccattcttc tgtgatcata aaggatccct tgagccactt gattttcaca ctgtcaatga
900
cctagagtca ccaaacacct ctcaacaagc cgtgggtctc acttgacatc tggaacaacg
960
ctcctcgggt ctgggaggac cacgcgtcga aagggaagag cagaggacgc tggctctcat
1020
ggcaggatgg tgtgtgtacg ggacgcgtct ttcgggagga tgacggcggc cttggagagc
1080
cccagaatgt cacaagcgtc catgaattcc ttcagactct ggaagctcga aacattctgc
1140
ctatctgagg ttgagatcag gatcacatca gagactccag ctctggccat tttagggctc
1200

```

gcaccctgac ccccatccct accccaggag ctgctgaaat gtcctcagag cttaggcgtg
 1260
 aagcaggggt tggtcagggg aggacagcgg ccg
 1293

<210> 3686
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 3686
 Met Gly Glu Gly Tyr Arg Leu Thr Gly Trp Arg Asp Val Ser Gln
 1 5 10 15
 Ala Pro Ser Pro Leu Ser Ser Gly Ala His Cys Arg Leu Leu Phe
 20 25 30
 Pro Val Cys Cys Glu Thr Asp His Arg Pro Ala Gln Arg Ser Pro Arg
 35 40 45
 Arg Val Pro Cys Leu Cys Pro Pro Arg Arg Arg His Pro Pro Arg Ser
 50 55 60
 Phe Thr Ser Cys Thr Phe Ser Gly Ser Arg Ser His Ile His Pro Thr
 65 70 75 80
 Trp Arg Ser Pro His Asp Val Pro Gly Ser Val Leu Ala Pro Ala Ala
 85 90 95
 Ala Leu Gly Asn Arg Ile Gly Lys Arg Ser Pro Arg Val Asp Ala
 100 105 110

<210> 3687
 <211> 566
 <212> DNA
 <213> Homo sapiens

<400> 3687
 nncggggcca agctcaaagc ttccagccgc acgtctgcct tgctctcggg cttcgccatg
 60
 gtggccatgg tggaggtgca gctggagagt gaccacgagt acccaccagg cctgctggtg
 120
 gctgtgcacc tctttgcact catgngtctc cacgtgtctg ctgccccaca ttgaagctgt
 180
 nngagcaaca tccacaacct caactctgtc caccagtcgc cacaccagag actgcaccgc
 240
 tacgtggagc tggcctgggg cttctccact gccttgggca cctttctctt ccttgctgaa
 300
 gttgtcctgg ttggttgggt caagtttgtg ccatttgggg ctcccttggg cacaccgacc
 360
 cccatggtgc ccacatcccg ggtgcccggg actctggcac cagtggctac ctcccttagt
 420
 ccagcttcca atctcccacg gtcctctgcg tctgcagcac cgtcccaggc tgagccagcc
 480
 tgcccacccc ggcaagcctg tgggtggtgg ggggcccatt ggccaggctg gcaagcagcc
 540
 atggcctcca cagccatcat ggtacc
 566

<210> 3688

<211> 57
 <212> PRT
 <213> Homo sapiens

<400> 3688
 Xaa Gly Ala Lys Leu Lys Ala Ser Ser Arg Thr Ser Ala Leu Leu Ser
 1 5 10 15
 Gly Phe Ala Met Val Ala Met Val Glu Val Gln Leu Glu Ser Asp His
 20 25 30
 Glu Tyr Pro Pro Gly Leu Leu Val Ala Val His Leu Phe Ala Leu Met
 35 40 45
 Xaa Leu His Val Ser Ala Ala Pro His
 50 55

<210> 3689
 <211> 1562
 <212> DNA
 <213> Homo sapiens

<400> 3689
 ggggttggggg ggccggagca gagagcacc agcccgagg gtggatgaat gtgggagaaa
 60
 atggagacca agacgatcgt gtacgacttg gacacatcag gggggctgat ggagcaaata
 120
 caagctctgc tggtccccc caagacggac gaggcagaaa agcgcagtcg gaagcctgag
 180
 aaggagcccc ggagaagcgg cagggccacc aaccacgaca gctgcgatag ctgcaaggaa
 240
 ggtggagatc tctgtgctg cgaccactgc ccggtgcct tccacctcca gtgctgtaac
 300
 cctccactga gtgaagaaat gttgcctcct ggagagtga tgtgtcaccg gtgcactgtt
 360
 cgccgaaaga aacgagagca gaaaaaggag ctgggtcatg tcaatggact ggtggacaaa
 420
 tctggcaaac ggactacatc cccagcagt gacactgact tggtggacag atcgccagc
 480
 aaaactgaac taaaggccat tgccatgcc cggtccttg aaaggagagc cagcaggcct
 540
 ggcacacca catccagcgc cagcacagag actccacct ctgagcagaa tgatgtcgac
 600
 gaagacatca ttgacgtgga tgaggaacca gtagcagcgg agccagacta tgtgcagccc
 660
 cagctgaggc ggccctttga gctgctgatt gctgccgcca tggagcggaa cccacccaa
 720
 tttcagttgc ccaatgaact gacttgtaac actgcactac caggttctag caagaggaga
 780
 agaaaggagg aaaccacagg gaaaaatgtt aagaagacac agcatgaatt agatcacaat
 840
 ggtctcgttc ccttaccgt caaagtctgc ttcacgtgta acaggagttg ccgtgtggct
 900
 cctctcatcc agtgtgacta ttgcctctc ctgtttcaca tggattgcct cgagccgccc
 960
 ctactgcc tgcctctggg cagatggatg tgtccgaatc acatcgaaca tgtggtgctg
 1020

aaccagaaga atatgacact gagcaatcgg tgccaggtgt ttgatcggtt ccaggacacc
1080
gtttcgcagc atgtcgtcaa agtggacttc ctgaaccgaa tccacaagaa gcacccccct
1140
aaccggcggtg tgctccagtc ggtcaaaaga agaagcttga aggttcctga tgctataaaa
1200
tctcagtacc agtttccacc cctctcatt gcacccgcgg ccattcggga cggggagctg
1260
atctgcaatg ggatccctga ggaatcacag atgcaccttt tgaactctga gcacttagcc
1320
acccaagcag agcagcaaga gtggctctgt agtgttgttg cgctccagtg cagcatattg
1380
aaacatttat ctgctaagca gatgccttcg cattgggact ctgaacagac agagaaggct
1440
gatattaagc ctgttattgt gactgacagc tcagtcacca cctccctgca aacagctgac
1500
aagacaccta caccttccca ctacccttg tctgcccct cagggattag caccagaat
1560
tc
1562

<210> 3690

<211> 504

<212> PRT

<213> Homo sapiens

<400> 3690

Met	Trp	Glu	Lys	Met	Glu	Thr	Lys	Thr	Ile	Val	Tyr	Asp	Leu	Asp	Thr
1				5					10					15	
Ser	Gly	Gly	Leu	Met	Glu	Gln	Ile	Gln	Ala	Leu	Leu	Ala	Pro	Pro	Lys
			20					25					30		
Thr	Asp	Glu	Ala	Glu	Lys	Arg	Ser	Arg	Lys	Pro	Glu	Lys	Glu	Pro	Arg
			35				40					45			
Arg	Ser	Gly	Arg	Ala	Thr	Asn	His	Asp	Ser	Cys	Asp	Ser	Cys	Lys	Glu
			50			55					60				
Gly	Gly	Asp	Leu	Leu	Cys	Cys	Asp	His	Cys	Pro	Ala	Ala	Phe	His	Leu
65					70				75					80	
Gln	Cys	Cys	Asn	Pro	Leu	Ser	Glu	Glu	Met	Leu	Pro	Pro	Gly	Glu	
			85					90					95		
Trp	Met	Cys	His	Arg	Cys	Thr	Val	Arg	Arg	Lys	Lys	Arg	Glu	Gln	Lys
			100					105					110		
Lys	Glu	Leu	Gly	His	Val	Asn	Gly	Leu	Val	Asp	Lys	Ser	Gly	Lys	Arg
			115				120					125			
Thr	Thr	Ser	Pro	Ser	Ser	Asp	Thr	Asp	Leu	Leu	Asp	Arg	Ser	Ala	Ser
			130			135					140				
Lys	Thr	Glu	Leu	Lys	Ala	Ile	Ala	His	Ala	Arg	Ile	Leu	Glu	Arg	Arg
145				150					155					160	
Ala	Ser	Arg	Pro	Gly	Thr	Pro	Thr	Ser	Ser	Ala	Ser	Thr	Glu	Thr	Pro
			165					170					175		
Thr	Ser	Glu	Gln	Asn	Asp	Val	Asp	Glu	Asp	Ile	Ile	Asp	Val	Asp	Glu
			180				185					190			
Glu	Pro	Val	Ala	Ala	Glu	Pro	Asp	Tyr	Val	Gln	Pro	Gln	Leu	Arg	Arg
			195			200						205			
Pro	Phe	Glu	Leu	Leu	Ile	Ala	Ala	Ala	Met	Glu	Arg	Asn	Pro	Thr	Gln


```

      210              215              220
Phe Gln Leu Pro Asn Glu Leu Thr Cys Thr Thr Ala Leu Pro Gly Ser
225              230              235              240
Ser Lys Arg Arg Arg Lys Glu Glu Thr Thr Gly Lys Asn Val Lys Lys
      245              250              255
Thr Gln His Glu Leu Asp His Asn Gly Leu Val Pro Leu Pro Val Lys
      260              265              270
Val Cys Phe Thr Cys Asn Arg Ser Cys Arg Val Ala Pro Leu Ile Gln
      275              280              285
Cys Asp Tyr Cys Pro Leu Leu Phe His Met Asp Cys Leu Glu Pro Pro
      290              295              300
Leu Thr Ala Met Pro Leu Gly Arg Trp Met Cys Pro Asn His Ile Glu
305              310              315              320
His Val Val Leu Asn Gln Lys Asn Met Thr Leu Ser Asn Arg Cys Gln
      325              330              335
Val Phe Asp Arg Phe Gln Asp Thr Val Ser Gln His Val Val Lys Val
      340              345              350
Asp Phe Leu Asn Arg Ile His Lys Lys His Pro Pro Asn Arg Arg Val
      355              360              365
Leu Gln Ser Val Lys Arg Arg Ser Leu Lys Val Pro Asp Ala Ile Lys
      370              375              380
Ser Gln Tyr Gln Phe Pro Pro Pro Leu Ile Ala Pro Ala Ala Ile Arg
385              390              395              400
Asp Gly Glu Leu Ile Cys Asn Gly Ile Pro Glu Glu Ser Gln Met His
      405              410              415
Leu Leu Asn Ser Glu His Leu Ala Thr Gln Ala Glu Gln Gln Glu Trp
      420              425              430
Leu Cys Ser Val Val Ala Leu Gln Cys Ser Ile Leu Lys His Leu Ser
      435              440              445
Ala Lys Gln Met Pro Ser His Trp Asp Ser Glu Gln Thr Glu Lys Ala
      450              455              460
Asp Ile Lys Pro Val Ile Val Thr Asp Ser Ser Val Thr Thr Ser Leu
465              470              475              480
Gln Thr Ala Asp Lys Thr Pro Thr Pro Ser His Tyr Pro Leu Ser Cys
      485              490              495
Pro Ser Gly Ile Ser Thr Gln Asn
      500

```

<210> 3691

<211> 418

<212> DNA

<213> Homo sapiens

<400> 3691

```

ncggccgcgcg agttcgacgg gaggtggccc aggcaaatag tgtcatcgat tggcctatgt
60
cgttatggtg ggaggattga ctgctgctgg ggctgggctc gccagtcttg gggacagtgt
120
cagcctttct acgtcttaag gcagagaata gccaggataa ggtgccagct caaagctgtg
180
tgccaaccac gatgcaaaca tggatgaatgt atcggggccaa acaagtgcaa gtgtcatcct
240
ggttatgctg gaaaaacctg taatcaaggt aggaaaacag tctgacataa atacacaatc
300

```

gaagacacct ctatcactcc caaattaaaa atattcttat ctcaaactac tttccatggc
 360
 tatttttcca aaatatgtga gctgccattt tgctgataaa taaaaatata ttaatgat
 418

<210> 3692

<211> 94

<212> PRT

<213> Homo sapiens

<400> 3692

Xaa	Ala	Ala	Glu	Phe	Asp	Gly	Arg	Trp	Pro	Arg	Gln	Ile	Val	Ser	Ser
1				5					10					15	
Ile	Gly	Leu	Cys	Arg	Tyr	Gly	Gly	Arg	Ile	Asp	Cys	Cys	Trp	Gly	Trp
			20					25					30		
Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Phe	Tyr	Val	Leu	Arg	Gln
		35					40					45			
Arg	Ile	Ala	Arg	Ile	Arg	Cys	Gln	Leu	Lys	Ala	Val	Cys	Gln	Pro	Arg
	50					55					60				
Cys	Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	Lys	Cys	His	Pro
65					70					75				80	
Gly	Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Gly	Arg	Lys	Thr	Val		
				85					90						

<210> 3693

<211> 2641

<212> DNA

<213> Homo sapiens

<400> 3693

cgccgcgcgc gacgggaaag agccgctaga gcagaccgcg ccgcccgcgc agccgcgcct
 60
 gcccaggccc ggggagggag gaggcgggag tcagggtgct gcgccccgct cggcgctccga
 120
 gcttcgggcc gggctgtgcc ccgcgcggtc ttcgccggga tgaagcgcgc ctgcgaggag
 180
 acgacctccg agagcgacat ggacgagacc atcgacgtgg ggagcgagaa caattactcg
 240
 gggcaaagta ctagctctgt gattagattg aattctccaa caacaacatc tcagattatg
 300
 gcaagaaaga aaaggagagg gattatagag aaaaggcgtc gggatcggat aaataacagt
 360
 ttatctgagt tgagaagact tgtgccaaact gcttttgaaa aacaaggatc tgcaaagtta
 420
 gaaaaagctg aaatattgca aatgacagtg gatcatttga agatgcttca ggcaacaggg
 480
 ggtaaaggct actttgacgc acacgtctct gccatggact tcatgagcat aggattccga
 540
 gagtgcctaa cagaagttgc gcggtacctg agctccgtgg aaggcctgga ctctcggat
 600
 ccgctgcggg tgcggcttgt gtctcatctc agcacttgcg ccaccacgcg ggaggcggcg
 660
 gccatgacat cctccatggc ccaccacnca tcatccgctc caccgcgcat actgggcccgc
 720

cgccctccac cacctgcccg cagccctgct ccagcccaac ggccctccatg cctcagagtc
780
aacccttgt cgccctctcca caacttcaga agtgccctcg cccacggctc tgctctctc
840
acggccacgt ttgcccatgc ggattcagcc ctccgaatgc catccacggg cagcgtcgcc
900
ccctgcgtgc cacctctctc cacctctctc ttgtccctct ctgccaccgt ccacgccgca
960
gccgcagcag ccaccgcggc tgcacacagc ttccctctgt ccttcgcggg ggcatccccc
1020
atgcttcccc caaacgcagc agcagcagtg gccgcggcca cagccatcag cccgcccttg
1080
tcagtatcag ccacgtccag tcctcagcag accagcagtg gaacaaacaa taaaccttac
1140
cgaccctggg ggacagaagt tggagctttt taaatttttc ttgaacttct tgcaatagta
1200
actgaatgtc ctccatttca ggtcagctt aaaacctctg caccctgaag gtagccatac
1260
agatgccgac agatccacaa aggaacaata aagctatttg agacacaaac ctacagagtg
1320
gaaatgtggc attctctttt ttttctctcc cttttttgtt tggttcaagg cagctcggtc
1380
actgacatca gcaacttttg aaaacttcac acttggtacc atttagaagt ttctggaaa
1440
atatatggac cgtaccatcc agcagtgcat cagtatgtct gaattgggga agtaaatgc
1500
cctgactgaa ttctcttgag actagatggg acatacatat atagagagag agtgagagag
1560
tcgtgtttcg taagtgcctg agcttaggaa gttttcttct ggatatataa cattgcacaa
1620
gggaagacga gtgtggagga taggttaaga aaggaaaggg acagaagtct tgcaataggc
1680
tgcagacatt ttaataccat gccagagaag agtattctgc tgaaaccaac aggttttact
1740
ggtcaaaatg actgctgaaa ataattttca agttgaaaga tctagtttta tcttagtttg
1800
ccttctttgt acagacatgc caagaggtga catttagcag tgcattggta taagcaatta
1860
tttcatcagt tctcagatta acaagcattt ctgctctgcc tgcaggcccc caggcacttt
1920
ttttttggat ggctcaaaat atggtgcttc tttatataaa ccttacattt atatagtga
1980
cctatgagca gttgcctacc atgtgtccac cagaggctat ttaattcatg ccaacttgaa
2040
aactctccag tttgtaggag tttggtttaa tttattcagt ttcattagga ctatttttat
2100
atatttatcc tcttcatttt ctccaatga tgcaacatct attcttgtca ccctttggga
2160
gaagttacat ttctggaggt gatgaagcaa ggaggagca ctaggaagag aaaagctaca
2220
atttttaag ctctttgtca agttagtgt tgcatctgat cccaaaacaa gatgaatgta
2280
tgcaatggga tgtacataag ttatttttgc ccatgcctaa actagtgtta tgtaatggg
2340

ttgtgggtttt gtttttttcg atttcgttta atgacaaaat aatctcttaa tatgctgaaa
 2400
 tcaagcacgt gagagttttt gtttaaaaga taagagacac agcatgtatt atgcacttca
 2460
 tttctctact gtgtggagaa agcaataaac attatgagaa tgttaaactg tatgcaaaaat
 2520
 tatacttttta aatatttggt ttgaaattac tgtacctagt cttttttgca ttactttgta
 2580
 acctttttct atgcaagagt ctttacatac cactaattaa atgaagtcct ttttgactat
 2640
 t
 2641

<210> 3694

<211> 390

<212> PRT

<213> Homo sapiens

<400> 3694

Arg	Pro	Arg	Arg	Glu	Arg	Ala	Ala	Arg	Ala	Asp	Arg	Ala	Ala	Ala
1			5					10					15	
Gly	Ala	Ala	Pro	Ala	Gln	Ala	Arg	Gly	Gly	Arg	Arg	Arg	Ala	Ser
			20					25					30	Gly
Cys	Cys	Ala	Pro	Leu	Gly	Val	Arg	Ala	Ser	Gly	Arg	Ala	Val	Pro
		35					40					45		Arg
Ala	Val	Phe	Ala	Gly	Met	Lys	Arg	Pro	Cys	Glu	Glu	Thr	Thr	Ser
	50					55				60				Glu
Ser	Asp	Met	Asp	Glu	Thr	Ile	Asp	Val	Gly	Ser	Glu	Asn	Asn	Tyr
65				70					75					80
Gly	Gln	Ser	Thr	Ser	Ser	Val	Ile	Arg	Leu	Asn	Ser	Pro	Thr	Thr
			85					90					95	Thr
Ser	Gln	Ile	Met	Ala	Arg	Lys	Lys	Arg	Arg	Gly	Ile	Ile	Glu	Lys
			100					105					110	Arg
Arg	Arg	Asp	Arg	Ile	Asn	Asn	Ser	Leu	Ser	Glu	Leu	Arg	Arg	Leu
		115					120					125		Val
Pro	Thr	Ala	Phe	Glu	Lys	Gln	Gly	Ser	Ala	Lys	Leu	Glu	Lys	Ala
		130				135					140			Glu
Ile	Leu	Gln	Met	Thr	Val	Asp	His	Leu	Lys	Met	Leu	Gln	Ala	Thr
145				150						155				160
Gly	Lys	Gly	Tyr	Phe	Asp	Ala	His	Ala	Leu	Ala	Met	Asp	Phe	Met
			165					170					175	Ser
Ile	Gly	Phe	Arg	Glu	Cys	Leu	Thr	Glu	Val	Ala	Arg	Tyr	Leu	Ser
		180					185						190	Ser
Val	Glu	Gly	Leu	Asp	Ser	Ser	Asp	Pro	Leu	Arg	Val	Arg	Leu	Val
		195					200					205		Ser
His	Leu	Ser	Thr	Cys	Ala	Thr	Gln	Arg	Glu	Ala	Ala	Ala	Met	Thr
		210				215					220			Ser
Ser	Met	Ala	His	His	Xaa	Ser	Ser	Ala	Pro	Pro	Ala	Ser	Leu	Gly
225				230						235				240
Arg	Leu	Pro	Pro	Pro	Ala	Arg	Ser	Pro	Ala	Pro	Ala	Gln	Arg	Pro
			245					250					255	Pro
Cys	Leu	Arg	Val	Asn	Pro	Leu	Ser	Pro	Leu	His	Asn	Phe	Arg	Ser
		260					265						270	Ala
Ser	Ala	His	Gly	Ser	Ala	Leu	Leu	Thr	Ala	Thr	Phe	Ala	His	Ala
														Asp

275	280	285
Ser Ala Leu Arg Met Pro	Ser Thr Gly Ser Val Ala	Pro Cys Val Pro
290	295	300
Pro Leu Ser Thr Ser Leu	Leu Ser Ala Thr Val His	Ala Ala
305	310	315
Ala Ala Ala Ala Thr	Ala Ala His Ser Phe	Pro Leu Ser Phe
325	330	335
Gly Ala Phe Pro Met Leu	Pro Pro Asn Ala Ala	Ala Val Ala Ala
340	345	350
Ala Thr Ala Ile Ser Pro	Pro Leu Ser Val Ser	Ala Thr Ser Ser
355	360	365
Gln Gln Thr Ser Ser Gly	Thr Asn Asn Lys Pro	Tyr Arg Pro Trp
370	375	380
Thr Glu Val Gly Ala Phe		
385	390	

<210> 3695

<211> 1615

<212> DNA

<213> Homo sapiens

<400> 3695

```

nggaaaagta gcctaaagtc agtataacta aagggtggaa cgaggtggga caagggtccg
60
aattgctgct cagtgatgtg tgtgtgcctg ccgctggtgg agctgagact gctcatctca
120
gaaggatggg gatgcttgat ttcttgcca ggttgtccca gcacagtggg gattggccct
180
gttgatgac gaagacagca catggtggca gagatagata ctaacccatg gactttccaa
240
gggagggaat aggtctttgg agggatatgca agacaaagg agacactgga taaagaaccc
300
ggtagtgccc aggtattacc ccactctggc cattactccc acactcagga accagacgtt
360
gtgggtgagg acatgctgtc cctctgcca agtaataact tccttcccag ccaggatcct
420
gccccaaagta ggaatatagc tctgcattta cagcagctcc tgctcagacc ttgtcaaaac
480
caccctgcag ctaggatta aggagcatgg tcacaggaag gtgggggttc agggcatccc
540
ctcaggaact gcccatctcc ccagaattcc aaaatgaagg tccatattgct tgtaggtgtg
600
ctggtcatgg tgggcttcac agtaggaaag ggtaagtggg gccaggggc agggagggag
660
gaaggggtaa ctgagtccag gaagggggtg gagcgtggcc atggataatc gggcttccca
720
ctggcccagg gtatttgaga gtgaccagt gcctccatcc ctcttctgc ctcccagtt
780
cctgttcccg acatccggac gtgccacttc tgctcgtag aagacccttc tgtaggatgc
840
atttcaggct cagagaagtg taccatcagc agctcatccc tgtgcatggt gatcaccatc
900
tattatgatg tcaaggttcg cttcatcggt cgaggctgtg gacagtacat ttctaccgc
960

```

tgccaagaaa aacgcaacac ctactttgca gagtactggt atcaggccca gtgctgtcag
 1020
 tacgattatt gcaactcctg gtcaagcccc caactccaga gctctctgcc ggagcccat
 1080
 gacaggcccc tggccctgcc tctgtctgac tcccagattc agtggttcta ccaggccctg
 1140
 aacctctccc tgccccctccc caatttccat gctgggacgg agcctgatgg cctggacccc
 1200
 atggtcacac tgtccctgaa cctgggcttg tcttttgctg agctgcgccg catgtacttg
 1260
 ttcctcaata gttcaggact tttggttctt ccccaggctg gactcttgac acctcacct
 1320
 tctgaattc cacagtcaa atatctttct gtaacacct cagcatcctg cactgccctc
 1380
 tctgaaaaca cccacattct ttggctactg tgatttctta ggctccgctc tgttgtagca
 1440
 ctacatcta tatgactttt gtgtaatttt ctctcttgaa ctcgaggaggc tgagacggga
 1500
 gaatcgcttg aaccggggag gcgagggttg cagtgcgccg agatcgcgcc actgcactcc
 1560
 agcctgggtg acacagtgcg actccgtctc caaaaaaag gatgaggaat agaat
 1615

<210> 3696

<211> 146

<212> PRT

<213> Homo sapiens

<400> 3696

Met	Val	Ile	Thr	Ile	Tyr	Tyr	Asp	Val	Lys	Val	Arg	Phe	Ile	Val	Arg
1				5					10					15	
Gly	Cys	Gly	Gln	Tyr	Ile	Ser	Tyr	Arg	Cys	Gln	Glu	Lys	Arg	Asn	Thr
			20					25					30		
Tyr	Phe	Ala	Glu	Tyr	Trp	Tyr	Gln	Ala	Gln	Cys	Cys	Gln	Tyr	Asp	Tyr
		35					40					45			
Cys	Asn	Ser	Trp	Ser	Ser	Pro	Gln	Leu	Gln	Ser	Ser	Leu	Pro	Glu	Pro
		50				55					60				
His	Asp	Arg	Pro	Leu	Ala	Leu	Pro	Leu	Ser	Asp	Ser	Gln	Ile	Gln	Trp
65					70					75				80	
Phe	Tyr	Gln	Ala	Leu	Asn	Leu	Ser	Leu	Pro	Leu	Pro	Asn	Phe	His	Ala
			85						90				95		
Gly	Thr	Glu	Pro	Asp	Gly	Leu	Asp	Pro	Met	Val	Thr	Leu	Ser	Leu	Asn
			100					105				110			
Leu	Gly	Leu	Ser	Phe	Ala	Glu	Leu	Arg	Arg	Met	Tyr	Leu	Phe	Leu	Asn
		115					120					125			
Ser	Ser	Gly	Leu	Leu	Val	Leu	Pro	Gln	Ala	Gly	Leu	Leu	Thr	Pro	His
		130					135					140			
Pro	Ser														
145															

<210> 3697

<211> 550

<212> DNA

<213> Homo sapiens

<400> 3697

ncggccgcgcg agttcgacgg gaggtggccc aggcaaatag tgtcatcgat tggcctatgt
 60
 cgttatggtg ggaggattga ctgctgctgg ggctgggctc gccagtcttg gggacagtgt
 120
 cagcctgtgt gccaaaccacg atgcaaacat ggtgagtgtg tcgggccaaa caagtgaag
 180
 tgtcatcctg gttatgctgg aaaaacctgt aatcaagatc taaatgagtg tggcctgaag
 240
 ccccgccct gtaagcacag gtgcatgaac acttacggca gctacaagtg ctactgtctc
 300
 aacggatata tgctcatgcc ggatgggtcc tgctcaagtg ccctgacctg ctccatggca
 360
 aactgtcagt atggctgtga tgttggttaa ggacaaatac ggtgccagtg cccatccct
 420
 ggctgcagc tggctcctga tgggaggacc tgtgtagatg ttgatgaatg tgctacagga
 480
 agagcctcct gccctaaatt taggcaatgt gtcaacactt ttgggagcta catctgcaag
 540
 tgtcataaag
 550

<210> 3698

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3698

Xaa	Ala	Ala	Glu	Phe	Asp	Gly	Arg	Trp	Pro	Arg	Gln	Ile	Val	Ser	Ser	1	5	10	15
Ile	Gly	Leu	Cys	Arg	Tyr	Gly	Gly	Arg	Ile	Asp	Cys	Cys	Trp	Gly	Trp	20	25	30	
Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Val	Cys	Gln	Pro	Arg	Cys	35	40	45	
Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	Lys	Cys	His	Pro	Gly	50	55	60	
Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Asp	Leu	Asn	Glu	Cys	Gly	Leu	Lys	65	70	75	80
Pro	Arg	Pro	Cys	Lys	His	Arg	Cys	Met	Asn	Thr	Tyr	Gly	Ser	Tyr	Lys	85	90	95	
Cys	Tyr	Cys	Leu	Asn	Gly	Tyr	Met	Leu	Met	Pro	Asp	Gly	Ser	Cys	Ser	100	105	110	
Ser	Ala	Leu	Thr	Cys	Ser	Met	Ala	Asn	Cys	Gln	Tyr	Gly	Cys	Asp	Val	115	120	125	
Val	Lys	Gly	Gln	Ile	Arg	Cys	Gln	Cys	Pro	Ser	Pro	Gly	Leu	Gln	Leu	130	135	140	
Ala	Pro	Asp	Gly	Arg	Thr	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	Gly	145	150	155	160
Arg	Ala	Ser	Cys	Pro	Lys	Phe	Arg	Gln	Cys	Val	Asn	Thr	Phe	Gly	Ser	165	170	175	
Tyr	Ile	Cys	Lys	Cys	His	Lys										180			

<210> 3699
 <211> 510
 <212> DNA
 <213> Homo sapiens

<400> 3699
 naggagagag attgagaact atgagagaca gcagctaaga gacaaaggag gcgggagact
 60
 gcctaggtgc cgcagcaccc acaccgtcct cttgcccccc cgccactggg accccagagc
 120
 tggcccttga tggaggggag cgcacctcgc agcagcctga gcctggccag cagcgcctcc
 180
 accatctcct cgctcagcag cctgagcccc aagaagccca cccgggcagt aaacaaggtc
 240
 cacgcctttg ggaagagagg caatgcgctc aggagggatc ccaaccttcc cgtgcacatc
 300
 cgaggctggc ttcataagca ggacagctcg gggctccgtc tctggaaacg ccgctgggtc
 360
 gtcctctccg gccattgcct cttttattac aaggacagcc gcgaggagag tgtcctaggg
 420
 agcgtcctgc tccccagcta caatattaga ccagatgggc cgggagcccc ccgagggcgg
 480
 cgcttcacct tcaccgcaga gcacccgggt
 510

<210> 3700
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 3700
 Met Glu Gly Ser Arg Pro Arg Ser Ser Leu Ser Leu Ala Ser Ser Ala
 1 5 10 15
 Ser Thr Ile Ser Ser Leu Ser Ser Leu Ser Pro Lys Lys Pro Thr Arg
 20 25 30
 Ala Val Asn Lys Val His Ala Phe Gly Lys Arg Gly Asn Ala Leu Arg
 35 40 45
 Arg Asp Pro Asn Leu Pro Val His Ile Arg Gly Trp Leu His Lys Gln
 50 55 60
 Asp Ser Ser Gly Leu Arg Leu Trp Lys Arg Arg Trp Phe Val Leu Ser
 65 70 75 80
 Gly His Cys Leu Phe Tyr Tyr Lys Asp Ser Arg Glu Glu Ser Val Leu
 85 90 95
 Gly Ser Val Leu Leu Pro Ser Tyr Asn Ile Arg Pro Asp Gly Pro Gly
 100 105 110
 Ala Pro Arg Gly Arg Arg Phe Thr Phe Thr Ala Glu His Pro Gly
 115 120 125

<210> 3701
 <211> 733
 <212> DNA
 <213> Homo sapiens

<400> 3701


```

ntgaattttc aaattacatt ctaggtttgc agcctctgga gcgtccagcg tcacattatt
60
attcactcag gagaaaaacc acacttgtgt gacatctgtg gtcgagggtt tagtaacttc
120
agtaatttga aggagcacia aaagacacac acggctgata aagtcttcac ctgtgatgag
180
tgtggaaagt cttttaatat gcaaaggaag ttagtaaagc acagaattcg gcacacgggg
240
gagcggcctt acagctgctc tgcctgcggg aaatgttttg ggggatcagg tgacctccgc
300
aggcatgtcc gcactcacac tgggggagaag ccgtacacat gtgagatctg taacaagtgc
360
tttaccgcgt ctgcggtgct cgggcggcac aagaagatgc actgcaaagc tggtgacgag
420
agcccgatg tgctggagga gctcagccaa gccatcgaga cctccgacct cgagaaatct
480
cagagctcag actctttctc ccaagacacg tctgtgacgc tgatgccagt gtcggttaaa
540
ctccctgtcc acccagtgga aaattctgtg gcagaatttg atagccactc tggcggctcc
600
tattgtaagt tacggtccat gatccaacct catggagtta gtgaccagga gaagctgagt
660
ttggatcctg gtaaacttgc caagccccag attcatcata cacagcctca tgcctattct
720
tactctgatt ttg
733

```

<210> 3702

<211> 236

<212> PRT

<213> Homo sapiens

<400> 3702

Val	Cys	Ser	Leu	Trp	Ser	Val	Gln	Arg	His	Ile	Ile	Ile	His	Ser	Gly
1				5					10					15	
Glu	Lys	Pro	His	Leu	Cys	Asp	Ile	Cys	Gly	Arg	Gly	Phe	Ser	Asn	Phe
			20					25					30		
Ser	Asn	Leu	Lys	Glu	His	Lys	Lys	Thr	His	Thr	Ala	Asp	Lys	Val	Phe
		35					40					45			
Thr	Cys	Asp	Glu	Cys	Gly	Lys	Ser	Phe	Asn	Met	Gln	Arg	Lys	Leu	Val
	50					55					60				
Lys	His	Arg	Ile	Arg	His	Thr	Gly	Glu	Arg	Pro	Tyr	Ser	Cys	Ser	Ala
65					70					75					80
Cys	Gly	Lys	Cys	Phe	Gly	Gly	Ser	Gly	Asp	Leu	Arg	Arg	His	Val	Arg
				85					90					95	
Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Thr	Cys	Glu	Ile	Cys	Asn	Lys	Cys
			100					105					110		
Phe	Thr	Arg	Ser	Ala	Val	Leu	Arg	Arg	His	Lys	Lys	Met	His	Cys	Lys
		115					120					125			
Ala	Gly	Asp	Glu	Ser	Pro	Asp	Val	Leu	Glu	Glu	Leu	Ser	Gln	Ala	Ile
	130					135					140				
Glu	Thr	Ser	Asp	Leu	Glu	Lys	Ser	Gln	Ser	Ser	Asp	Ser	Phe	Ser	Gln
145					150					155					160
Asp	Thr	Ser	Val	Thr	Leu	Met	Pro	Val	Ser	Val	Lys	Leu	Pro	Val	His

										165			170			175		
Pro	Val	Glu	Asn	Ser	Val	Ala	Glu	Phe	Asp	Ser	His	Ser	Gly	Gly	Ser			
										180			185			190		
Tyr	Cys	Lys	Leu	Arg	Ser	Met	Ile	Gln	Pro	His	Gly	Val	Ser	Asp	Gln			
										195			200			205		
Glu	Lys	Leu	Ser	Leu	Asp	Pro	Gly	Lys	Leu	Ala	Lys	Pro	Gln	Ile	His			
										210			215			220		
His	Thr	Gln	Pro	His	Ala	Tyr	Ser	Tyr	Ser	Asp	Phe							
										225			230			235		

<210> 3703

<211> 3294

<212> DNA

<213> Homo sapiens

<400> 3703

```

nncggccgcc gcgtccggct gctggaccga acttctgccg tgcggacagc aggagcagcg
60
ccgagcccca ttccccacc tctccagctc gccctctgag cctcccgagc cctctctcca
120
tttcccacaa ttgtgctgca catgggtgat agtttccggg tgtctgagct ccagggtgctt
180
cttggctttg ctggccggaa caagagtgga cggaagcacg agctcctggc caaggctctg
240
cacctcctga agtccagctg tgcccctagt gtccagatga agatcaaaga gctttaccga
300
cgacgctttc cccggaagac cctggggccc tctgatctct cccttctctc tttgccccct
360
ggcacctctc ctgtaggctc ccctggtcct ctagctccca ttcccccaac gctgttggcc
420
cctggcacc cgtctggggccc caagcgtgag gtggacatgc accccctct gccccagcct
480
gtgcaccctg atgtcaccat gaaaccattg cccttctatg aagtctatgg ggagctcatc
540
gggcccacca cccttgcatc cacttctagc cagcggtttg aggaagcgca ctttaccttt
600
gccctcacac cccagcaagt gcagcagatt cttacatcca gagaggttct gccaggagcc
660
aaatgtgatt ataccataca ggtgcagcta aggttctgtc tctgtgagac cagctgcccc
720
caggaagatt attttcccc caacctcttt gtcaaggta atgggaaact gtgccccctg
780
ccgggttacc ttcccccaac caagaatggg gccgagccca agaggcccag ccgccccatc
840
aacatcacac ccctggctcg actctcagcc actgttccca acaccattgt ggtcaattgg
900
tcattctgagt tcggacggaa ttactccttg tctgtgtacc tggtgaggca gttgactgca
960
ggaacccttc taaaaaaact cagagcaaag ggtatccgga acccagacca ctgcggggca
1020
ctgatcaagg agaaattgac tgctgaccct gacagtgagg tggccactac aagtctccgg
1080
gtgtcactca tgtgcccgtc agggaagatg cgctgactg tcccttgctg tgccctcacc
1140

```

tgcgcccacc tgcagagctt cgatgctgcc ctttatctac agatgaatga gaagaagcct
1200
acatggacat gtcctgtgtg tgacaagaag gctccctatg aatctcttat cattgatggt
1260
ttatttatgg agattcttag ttctgttca gattgtgatg agatccaatt catggaagat
1320
ggatcctggt gcccaatgaa acccaagaag gaggcacatg aggtttgccc cccgccaggg
1380
tatgggctgg atggcctcca gtacagccca gtccaggggg gagatccatc agagaataag
1440
aagaaggtcg aagttattga cttgacaata gaaagctcat cagatgagga ggatctgccc
1500
cctaccaaga agcactgttc tgtcacctca gctgccatcc cggccctacc tgggaagcaaa
1560
ggagtcctga catctggcca ccagccatcc tgggtgctaa ggagccctgc tatgggcacg
1620
ttgggtgggg atttcctgtc cagtctccca ctacatgagt acccacctgc cttcccactg
1680
ggagccgaca tccaaggttt agatttattt tcattttcttc agacagagag tcagcactat
1740
ggccccctctg tcatcacctc actagatgaa caggatgccc ttggccactt cttccagtac
1800
cgagggaccc cttctcactt tctgggcccc ctggccccca cgctggggag ctcccactgc
1860
agcgccactc cggcgcccc tctggccgt gtcagcagca ttgtggcccc tggggggggc
1920
ttgaggaggg ggcattggagg acccctgccc tcagggtccct ctttgactgg ctgtcgggtca
1980
gacatcattt ccctggactg agttccctgg attatggaaa cttegtgtgc ccccaact
2040
gagcaagtat gctgtggagt cccaaccca gctactctga tccctctggg ggctctggcc
2100
aagggccaga cagaccttca cagatgccta cttttggcct catctctgcc tgacaaggcc
2160
agcacccaaa gggttaatat ttaacctctt ttaaggaca ctgggggtctg tttctggaaa
2220
tgttcttttag atggtggcac attcctttgg gtatgttaac ctaggcagtg ggaggcaaat
2280
gggatggtat gtgagctagg agaagggtg aaccctcagc cttgactatg tctagagcct
2340
cttggggaag gggcacctct cttgaacccc aaatgctctc tcttcttatt acccaaacc
2400
atggctctat ttcttcttca catccattgt ctcttcatgt ctattccatt cccttcggcc
2460
aaacagacag gtggaaaaac tgagacaggc agtttcagag atggacagag aactttattt
2520
tggattgtgg atgtggactt ttttgtacat aaataagaaa aaccaaata ctccaaagat
2580
gacttcccc tgcctcactt ccagtatgac agaggaggat gtaaggcctt agccatgatc
2640
tgcaggggtc tgggagtcag gcccgcccta ttgcttgggt ctctctctat ttatatctt
2700
aagttcacag tgtttcttat tccccctaa gcttctagag gctcatggcc ctgtagttag
2760

gcctggctca ttctgcacct ttccagggag gtggaaggac cctgtgccct ccttcccaat
 2820
 cttctttttc aggctcgcca aggcctagga cctatgttgt aattttactt tttatttcta
 2880
 aagttgtagt gaagctctca ccataataa aggttgtgaa tgttctgtga gtgtcatgga
 2940
 gatgggctag ggaggggatt ttacacttca ctttccagac ccctgggttg ggggaagagg
 3000
 gtccatgttc cattcttctt ttgctggccc tgggtccagg taagctgcac ttttacacgg
 3060
 tgggggtggt ctgccagat gttgcagcca gagcttgagg gcaaacttgg ttccagtgtc
 3120
 gactctctct ttgtctctct ccattgggttg gatcatccgc aggaggggtg acatgtgcag
 3180
 gaccagaggt cgggctcttc catcctcttc tagttccact gcaaggacag aggggtggtag
 3240
 gtcttggggg agaagtccgg gtgtctctgt cccatctctt gcggcagcca ctgc
 3294

<210> 3704

<211> 619

<212> PRT

<213> Homo sapiens

<400> 3704

Met	Val	Met	Ser	Phe	Arg	Val	Ser	Glu	Leu	Gln	Val	Leu	Leu	Gly	Phe
1				5				10						15	
Ala	Gly	Arg	Asn	Lys	Ser	Gly	Arg	Lys	His	Glu	Leu	Leu	Ala	Lys	Ala
			20					25					30		
Leu	His	Leu	Leu	Lys	Ser	Ser	Cys	Ala	Pro	Ser	Val	Gln	Met	Lys	Ile
		35					40					45			
Lys	Glu	Leu	Tyr	Arg	Arg	Arg	Phe	Pro	Arg	Lys	Thr	Leu	Gly	Pro	Ser
	50					55					60				
Asp	Leu	Ser	Leu	Leu	Ser	Leu	Pro	Pro	Gly	Thr	Ser	Pro	Val	Gly	Ser
65					70					75					80
Pro	Gly	Pro	Leu	Ala	Pro	Ile	Pro	Pro	Thr	Leu	Leu	Ala	Pro	Gly	Thr
				85					90					95	
Leu	Leu	Gly	Pro	Lys	Arg	Glu	Val	Asp	Met	His	Pro	Pro	Leu	Pro	Gln
			100					105					110		
Pro	Val	His	Pro	Asp	Val	Thr	Met	Lys	Pro	Leu	Pro	Phe	Tyr	Glu	Val
		115					120					125			
Tyr	Gly	Glu	Leu	Ile	Arg	Pro	Thr	Thr	Leu	Ala	Ser	Thr	Ser	Ser	Gln
	130					135					140				
Arg	Phe	Glu	Glu	Ala	His	Phe	Thr	Phe	Ala	Leu	Thr	Pro	Gln	Gln	Val
145					150					155					160
Gln	Gln	Ile	Leu	Thr	Ser	Arg	Glu	Val	Leu	Pro	Gly	Ala	Lys	Cys	Asp
			165					170					175		
Tyr	Thr	Ile	Gln	Val	Gln	Leu	Arg	Phe	Cys	Leu	Cys	Glu	Thr	Ser	Cys
		180					185					190			
Pro	Gln	Glu	Asp	Tyr	Phe	Pro	Pro	Asn	Leu	Phe	Val	Lys	Val	Asn	Gly
		195					200					205			
Lys	Leu	Cys	Pro	Leu	Pro	Gly	Tyr	Leu	Pro	Pro	Thr	Lys	Asn	Gly	Ala
	210					215					220				
Glu	Pro	Lys	Arg	Pro	Ser	Arg	Pro	Ile	Asn	Ile	Thr	Pro	Leu	Ala	Arg

225					230					235				240	
Leu	Ser	Ala	Thr	Val	Pro	Asn	Thr	Ile	Val	Val	Asn	Trp	Ser	Ser	Glu
				245					250					255	
Phe	Gly	Arg	Asn	Tyr	Ser	Leu	Ser	Val	Tyr	Leu	Val	Arg	Gln	Leu	Thr
			260						265				270		
Ala	Gly	Thr	Leu	Leu	Gln	Lys	Leu	Arg	Ala	Lys	Gly	Ile	Arg	Asn	Pro
		275					280				285				
Asp	His	Ser	Arg	Ala	Leu	Ile	Lys	Glu	Lys	Leu	Thr	Ala	Asp	Pro	Asp
	290					295				300					
Ser	Glu	Val	Ala	Thr	Thr	Ser	Leu	Arg	Val	Ser	Leu	Met	Cys	Pro	Leu
305					310					315				320	
Gly	Lys	Met	Arg	Leu	Thr	Val	Pro	Cys	Arg	Ala	Leu	Thr	Cys	Ala	His
			325						330				335		
Leu	Gln	Ser	Phe	Asp	Ala	Ala	Leu	Tyr	Leu	Gln	Met	Asn	Glu	Lys	Lys
			340					345				350			
Pro	Thr	Trp	Thr	Cys	Pro	Val	Cys	Asp	Lys	Lys	Ala	Pro	Tyr	Glu	Ser
	355					360					365				
Leu	Ile	Ile	Asp	Gly	Leu	Phe	Met	Glu	Ile	Leu	Ser	Ser	Cys	Ser	Asp
	370				375					380					
Cys	Asp	Glu	Ile	Gln	Phe	Met	Glu	Asp	Gly	Ser	Trp	Cys	Pro	Met	Lys
385				390					395				400		
Pro	Lys	Lys	Glu	Ala	Ser	Glu	Val	Cys	Pro	Pro	Pro	Gly	Tyr	Gly	Leu
			405					410				415			
Asp	Gly	Leu	Gln	Tyr	Ser	Pro	Val	Gln	Gly	Gly	Asp	Pro	Ser	Glu	Asn
		420					425				430				
Lys	Lys	Lys	Val	Glu	Val	Ile	Asp	Leu	Thr	Ile	Glu	Ser	Ser	Ser	Asp
	435					440				445					
Glu	Glu	Asp	Leu	Pro	Pro	Thr	Lys	Lys	His	Cys	Ser	Val	Thr	Ser	Ala
	450				455				460						
Ala	Ile	Pro	Ala	Leu	Pro	Gly	Ser	Lys	Gly	Val	Leu	Thr	Ser	Gly	His
465				470					475					480	
Gln	Pro	Ser	Ser	Val	Leu	Arg	Ser	Pro	Ala	Met	Gly	Thr	Leu	Gly	Gly
			485					490				495			
Asp	Phe	Leu	Ser	Ser	Leu	Pro	Leu	His	Glu	Tyr	Pro	Pro	Ala	Phe	Pro
		500					505				510				
Leu	Gly	Ala	Asp	Ile	Gln	Gly	Leu	Asp	Leu	Phe	Ser	Phe	Leu	Gln	Thr
	515					520					525				
Glu	Ser	Gln	His	Tyr	Gly	Pro	Ser	Val	Ile	Thr	Ser	Leu	Asp	Glu	Gln
	530				535					540					
Asp	Ala	Leu	Gly	His	Phe	Phe	Gln	Tyr	Arg	Gly	Thr	Pro	Ser	His	Phe
545				550					555					560	
Leu	Gly	Pro	Leu	Ala	Pro	Thr	Leu	Gly	Ser	Ser	His	Cys	Ser	Ala	Thr
			565					570				575			
Pro	Ala	Pro	Pro	Pro	Gly	Arg	Val	Ser	Ser	Ile	Val	Ala	Pro	Gly	Gly
		580					585					590			
Ala	Leu	Arg	Glu	Gly	His	Gly	Gly	Pro	Leu	Pro	Ser	Gly	Pro	Ser	Leu
	595					600					605				
Thr	Gly	Cys	Arg	Ser	Asp	Ile	Ile	Ser	Leu	Asp					
	610					615									

<210> 3705

<211> 1737

<212> DNA

<213> Homo sapiens

<400> 3705

ttttggaggg aaaggatgca ctttcatggt taacaaaata aattaaatat acgggggcttc
60
agctcaaact ctacataaaa ttacagagat ctggggccac cacgacagtg ggggtgggggg
120
tggtgtctgg cctggacggg gtgtggtcat cagcatggct gaaagaccag gcgggtcccg
180
ggccccagga gagaccacag tccctgcaac ccagtcttcc ttccatcatt attaatatta
240
tcttcatttc ttaaataata ataccaaggc cccttctctg tgtcaggggg agaatgcagt
300
ggggatgagc cactagccat gggctccagc ctctcaggct tggggctgct gtgccccaa
360
ccccagccca cagcagtagg ggactcctgg gcacccaagg cagggtggcaa aaatagccgc
420
caaggccagg ggacagaggc ggggatggag gcggggactg aggcggggac agaggcgggc
480
agagttgggg gagtgacggg ggagcagga aagtcctca tcaactatga gcctcacggc
540
acagtgactg caggcttcac ggcacacct cccaaaagca cgtcagtctg cgtgtgtnc
600
aggcagcata tctgcacctg tgtgtgcatg tgtgtccgga agtgtgtgcc caggcagcat
660
atctgcatgt gtgcgtgctg gtgtatccgg acagcaatct gcacgtgtgt gcatgtccag
720
acagcatatc tgtgcacatg tgtgtgtcca ggcaatatct gcacgtgtgt gagtgttgag
780
gcagcattat ctgtgtgtgt gtccaggagc atatctgcgt gcgtgtgtgt gtccnggaca
840
gcatatctgt gcatgcgtgt gtgtgtccgg acagcagtct gcgtgtgtgt gtgactagac
900
agcatatctg cgtgtgtcca ggcagcatat ctgcgcctgt gcacgtgtgt ctggaagtgt
960
gtgtccggca gcatatctgc atgtgtgtgc gtgtccnaga cagcatatct gtgcacgcgt
1020
gtgtgtgtgt gtgtccaggc anatatccgt gcatgtgtgt gtcaaggcag cattatctgt
1080
gtgtccagga gcatatctgt gcacgtgtgt gtccggatac atatctgcac gtgtgtggtc
1140
cagacagcat atccgtgtgt gtgtgtgtgt nccaggcagc acatctgcgc atgggtgtgc
1200
gtgnntgtat gttcaggcag catgtccttg tatgttctgg catgtctctg tgctgtgtgc
1260
tgcatttggg cagcttatct gtgtgccag gcggcatatc tgtgcatgtg cgtgtgtgcg
1320
tacgtgtgcc ttncaggag cacgtgtgcg cgcagtgtgt tgcatatcat catccaggta
1380
tgtgtgtgtc tgtgtgtgtg tgtccagggg ctatgcctca cacacagact gcctgggggtg
1440
ctggccattc ctctctgcca tgggtccctt gccttcgtct gcagctccgt cctccatcct
1500
cccagtctgc ctgtctggcc ggcccccccg tgcccactgc agatacgggt cgtctagca
1560

ctgatagtgg atgtgctggg ggaccttgcc ctccacgtgt gagtgtgtgt gagagtgtgt
 1620
 gtgtgtgtgt gtgtgtggat gtctgtgtag agtttggggg acaacttagg gccagcaact
 1680
 gggcctgggc ccaataagtg ctgggggggc tgccggagac ccatgctcct cacacag
 1737

<210> 3706

<211> 191

<212> PRT

<213> Homo sapiens

<400> 3706

Met	Gly	Ser	Ser	Leu	Ser	Gly	Leu	Gly	Leu	Leu	Cys	Pro	Gln	Pro	Gln
1				5					10					15	
Pro	Thr	Ala	Val	Gly	Asp	Ser	Trp	Ala	Pro	Lys	Ala	Gly	Gly	Lys	Asn
			20					25					30		
Ser	Arg	Gln	Gly	Gln	Gly	Thr	Glu	Ala	Gly	Met	Glu	Ala	Gly	Thr	Glu
		35					40					45			
Ala	Gly	Thr	Glu	Ala	Gly	Arg	Val	Gly	Gly	Val	Thr	Val	Glu	Gln	Gly
	50					55				60					
Lys	Ser	Leu	Ile	Asn	Tyr	Glu	Pro	His	Gly	Thr	Arg	Thr	Ala	Gly	Phe
65				70					75					80	
Thr	Ala	His	Pro	Pro	Lys	Ser	Thr	Ser	Val	Cys	Val	Cys	Xaa	Arg	Gln
			85					90						95	
His	Ile	Cys	Thr	Cys	Val	Cys	Met	Cys	Val	Arg	Lys	Cys	Val	Pro	Arg
			100					105					110		
Gln	His	Ile	Cys	Met	Cys	Ala	Cys	Val	Cys	Ile	Arg	Thr	Ala	Ile	Cys
	115						120					125			
Thr	Cys	Val	His	Val	Gln	Thr	Ala	Tyr	Leu	Cys	Thr	Cys	Val	Cys	Pro
	130					135					140				
Gly	Asn	Ile	Cys	Thr	Cys	Val	Ser	Val	Glu	Ala	Ala	Leu	Ser	Val	Cys
145					150				155					160	
Val	Ser	Arg	Ser	Ile	Ser	Ala	Cys	Val	Cys	Val	Ser	Xaa	Thr	Ala	Tyr
			165					170					175		
Leu	Cys	Met	Arg	Val	Cys	Val	Arg	Thr	Ala	Val	Cys	Val	Cys	Val	
			180					185					190		

<210> 3707

<211> 585

<212> DNA

<213> Homo sapiens

<400> 3707

ntctgccaaag ggatgatatc tatgtgtcag atgttgagga cgacgggtgat gacacatctc
 60
 tggatagtga cctggatcca gaggagctgg caggagtcag gggacatcag ggtctaaggg
 120
 accaaaagcg tatgcgactt actgaagtgc aagatgataa agaggaggta ggatttcacc
 180
 tggcttcaac atgtgctagc tatcaatgtg atacattata tacaacaaaa ggaaagaaca
 240
 aaaatatggg gcatttcatt ggatgctgaa aatgcatttg ataacattca acttcctac
 300

atgataaaaa ccccaagaa actgggtata gaaggaatgt atctcaacgt aataaaagcc
 360
 gtatatgaca gaccancagt tagtatcatc ctgaatgggg aaaatctaca agaactacaa
 420
 accttttggtt taagatctgg aacacaacaa ggctgcccgc tttcaccaca gttactgaac
 480
 atagtactat aagtcctagc taggcgaatc agaggagaaa taaggggcat gcaaattggg
 540
 aaggaagaag tcaaattgtc cttatttaca gatgataaga tctta
 585

<210> 3708

<211> 106

<212> PRT

<213> Homo sapiens

<400> 3708

Asp	Phe	Thr	Trp	Leu	Gln	His	Val	Leu	Ala	Ile	Asn	Val	Ile	His	Tyr
1				5					10					15	
Ile	Gln	Gln	Lys	Glu	Arg	Thr	Lys	Ile	Trp	Gly	Ile	Ser	Leu	Asp	Ala
			20					25					30		
Glu	Asn	Ala	Phe	Asp	Asn	Ile	Gln	Leu	Pro	Tyr	Met	Ile	Lys	Thr	Leu
		35					40					45			
Lys	Lys	Leu	Gly	Ile	Glu	Gly	Met	Tyr	Leu	Asn	Val	Ile	Lys	Ala	Val
		50				55					60				
Tyr	Asp	Arg	Pro	Xaa	Val	Ser	Ile	Ile	Leu	Asn	Gly	Glu	Asn	Leu	Gln
65					70					75				80	
Glu	Leu	Gln	Thr	Phe	Gly	Leu	Arg	Ser	Gly	Thr	Gln	Gln	Gly	Cys	Pro
				85					90					95	
Leu	Ser	Pro	Gln	Leu	Leu	Asn	Ile	Val	Leu						
			100					105							

<210> 3709

<211> 3768

<212> DNA

<213> Homo sapiens

<400> 3709

nnaccggtcc cctaccccc tcccgcttg ccgccccggc ccgccgtgac ccacggccgc
 60
 ctccggagcc cgacgcgggc atatacttct cttgtcttg ttggatgcac aaatctgtgt
 120
 gcagtgttt ttgccgttg cctagacgat cacttggttt ctctgaggat gtctggttct
 180
 cgtaaagagt ttgatgtgaa acagattttg aaaatcagat ggaggtggtt tggatcatca
 240
 gcatcatctc ctaattctac agttgacagc cagcaggag aattttggaa ccgaggacag
 300
 actggagcaa acggtgggag aaagttttta gatccatgta gcctacaatt gcctttggct
 360
 tcaattgggt accgaaggtc cagccaactg gattttcaga attcaccttc ttggccaatg
 420
 gcatccacct ctgaagtccc tgcatttgag ttacagcag aagattgtgg cggtgcacat
 480

tggctggata gaccagaagt ggatgatggc actagtgaag aagaaaatga atctgattcc
540
agttcatgca ggacttccaa tagtagtcag acattatcat cctgtcatac tatggagcca
600
tgtacatcag atgaatTTTT ccaagccctt aatcatgccg agcaaacatt taaaaaatg
660
gaaaactatt tgagacataa acagtttgtg gatgtaattt tagtcgctgg tgatcgcaga
720
attccagctc acagattggg gctctcctct gtctcagact attttgctgc catgtttact
780
aatgatgtca gagaagcaag ataagaagac ataaaaatgg aagggtgtaga accaaattca
840
tcgtggcctt tgatccaata tgettataca ggccgccttg aattaaaaga agataatatt
900
gagtgcctgt tatctacagc ttgccttctt cagctttcac aggctgtaga agcatgttgt
960
aagtttttaa tgaaacagct tcatccatcc cagctcttgg gaattcttcc ttttgctgat
1020
gccaagggtt gtacagattt gcataaagtg gctcacaatt atactatgga gcatttcattg
1080
gaagtaatca gaaaccagga atttgtatta ttaccagcca gcgaaattgc aaagctcttg
1140
gctagtgatg acatgaacat tcctaattgag gagacaatat tgaatgcact tcttacttgg
1200
gtccgtcatg atttggaaca gagacggaaa gatctaagta aacttttggc ttatattagg
1260
ctacctcttc ttgcaccaca gttcctggca gacatggaaa ataatgtact ttttcgggat
1320
gatatagaat gtcagaaact cattatggaa gcaatgaagt accatttatt accagagaga
1380
cgacccatgt tacaaagtcc tcggacaaaa cctaggaagt caactgttgg tacattattt
1440
gcagttgggg gaatggattc aacaaaagga gcaacaagca ttgaaaagta tgatctccgt
1500
acaaatatgt ggactccagt agcaaatatg aatgggagga ggctacagtt cgggtgttga
1560
gtgctagatg acaaactgta tgtggttggg ggaagagatg gactgaagac tttgaatact
1620
gtagagtgtc acaaccccaa aacaaaaact tggagtgtga tgccacctat gtccacacat
1680
agacatggcc ttggtgtggc tgtactggaa ggtcccatgt atgccgtagg aggacatgat
1740
ggctggagct atctgaacac agtggaaaaga tgggaccctc aggctcgcca gtggaatttt
1800
gttgccacta tgtctacccc taggagtaca gtaggtgtgg cagtactaag tggaaaactt
1860
tatgcagttg gtggtcgtga tggaaattct tgtctcaaact cagtagaatg ttttgatcct
1920
catactaata agtggacact gtgtgcacag atgtcaaaaa ggagaggtgg cgtaggagtg
1980
acgacctgga atggactgct gtatgctata ggggggcacg atgctccgc atccaacttg
2040
acttccagac tctcagactg tgtggaaaaga tatgatcca aaacagacat gtggactgca
2100

gtagcatcca tgagcatcag cagagatgca gtgggggtct gtttacttgg tgataagtta
2160
tatgctgttg ggggggatga tggacaggca taccttaata ccgtggaggc ttatgatccc
2220
cagacaaatg agtggaccca ggtattttca catacttttg aggacagcaa agatcacctg
2280
gtggccatca agcagaccat ctggaggcaa aactccttat ctgaggaatt cagaagtcac
2340
tagactgecc tattatctaa agccggcatc ttgtactagg cttctttacc aaaaatgtat
2400
ttaataaaaac atttccaacc tgtgaaaaaa aaaaaaaaaa attttttttt ttttgcttca
2460
aagagctttt ctgagagcag ggatttattt tcattacatg caacatggac aaacactggt
2520
ctggttttca tgacaatttg aattcaaagt aatatgtttt tctaaaattc agtgtattta
2580
tttggccata tggatgctcc ttgtgttctt ggtcacatat taaagaaact ggcactttgg
2640
ctgcaagaac aaataaaaaa tatcataaat ccaactggtc tttgatttgg gtctagggtta
2700
ataactaaag aaccattcag caataatggc ttgaaacatt tatatattcct atgaaaccgc
2760
aattagttaa gaggtgctg attctaataa ctatgacacc agcaaggagg tgagggggaga
2820
aatgttaact ctggatgcca aattcagagc aaagtatcta ttatctcctt ctacttttg
2880
cagtatctat aaataaagtg gtgggggggag aattatatga ataagttaa ataaaagtgc
2940
atacagaact gagaaatatt ttcattggaat ttgccactta gttcttaaaa ttcttataag
3000
gaaaataacc atttacaaca aaagactagt tacactgttg ctgttttagaa catgagagca
3060
aatgagtaa caatcaaatt ctctggttta aacttaatta tcttaaaaca tgttattctg
3120
taagttgaca tctatgcctt gaaaattcaa ggcagaaagt aaaatcattt agaaagccag
3180
aaattccatc aatacatcta gacagatggt tgcttgtagt ttttggtatc caaaccttt
3240
tttccacaca tcgcacagat gccttttttg taggcacagc cctggcagta atgagaacct
3300
ggttggtgca cagaactttt acaaattcta caagtggaga acttattctt tccatattga
3360
tcaaattctg ctttttttga agtcaaagct ttattttcat tcagctttct tccaccactt
3420
tctgtggtat tcctagcacc atctttccat gtatctggag tgataacagt accaagtttc
3480
ttttcacatt tttgcacac catccttccc cagcacacct ttttcttccc gatctgaacc
3540
cctgttgact aatcttgctt gggtttgtgt aggtctgcag gaaggaaggc tgaaaaagcg
3600
gacgaagatt ttgacttaag tgggactttg tgatttaatt ttttcttttt ttttaagtggg
3660
gaggaagggg aagctagatg gactaggaga gacttgattt tgggtgctaaa gttccccagt
3720

tcatatgtga catcttttta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
3768

<210> 3710

<211> 70

<212> PRT

<213> Homo sapiens

<400> 3710

Met	Glu	Pro	Cys	Thr	Ser	Asp	Glu	Phe	Phe	Gln	Ala	Leu	Asn	His	Ala
1				5				10					15		
Glu	Gln	Thr	Phe	Lys	Lys	Met	Glu	Asn	Tyr	Leu	Arg	His	Lys	Gln	Leu
		20						25					30		
Cys	Asp	Val	Ile	Leu	Val	Ala	Gly	Asp	Arg	Arg	Ile	Pro	Ala	His	Arg
		35					40					45			
Leu	Val	Leu	Ser	Ser	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	Phe	Thr	Asn
		50				55					60				
Asp	Val	Arg	Glu	Ala	Arg										
65					70										

<210> 3711

<211> 1366

<212> DNA

<213> Homo sapiens

<400> 3711

nctcactttt ctgacacgca ggcgatcggt cttgtggaga accagagtga ctggtacctg
60
ggcaacctct ggaagaacca caggccctgg cctgccttgg gccggggatt taacacaggt
120
gtgatcctgc tgcggctgga ccggctccgg caggctggct gggagcagat gtggaggctg
180
acagccaggc gggagctcct tagcctgcct gccgcctcac tggctgacca ggacatcttc
240
aacgctgtga tcaaggagca cccggggcta gtgcagcgtc tgccttgtgt ctggaatgtg
300
cagctgtcag atcacacact ggccgagcgc tgctactctg aggcgtctga cctcaagggt
360
atccactgga actcaccaaa gaagcttcgg gtgaagaaca agcatgtgga attcttccgc
420
aatttctacc tgaccttctt ggagtacgat gggaacctgc tgcggagaga gctcttttgt
480
tgccccagcc agccccacc tgggtgctgag cagttgcagc aggccctggc acaactggac
540
gaggaagacc cctgctttga gttccggcag cagcagctca ctgtgcaccg tgtgcatgtc
600
actttctgc cccatgaacc gccaccccc cggcctcacg atgtcaccct tgtggcccag
660
ctgtccatgg accggctgca gatgttgaa gccctgtgca ggcactggcc tggccccatg
720
agcctggcct tgtacctgac agacgcggaa gctcagcagt tcctgcattt cgtcgaggcc
780
tcaccagtgc ttgtgccccg gcaggacgtg gcctaccatg tgggtgtaccg tgaggggccc
840

ctataccccg tcaaccagct tcgcaacgtg gccttggtccc aggccctcac gccttacgtc
 900
 ttccctcagt acattgactt cctgcctgcc tattctctct acgactacct cagggcctcc
 960
 attgagcagc tggggctggg cagccggcgc aaggcagcac tgggtggtgcc ggcatttgag
 1020
 accctgcgct accgcttcag cttcccccat tccaaggtgg agctgttggc cttgctggat
 1080
 gcggggcactc tctacacctt caggtaggag aggctacttc tctgcccact ccaactcactt
 1140
 gccacactg gccccacta cccacgagct cctagcctca gcctggctcc caccgaccc
 1200
 tgctgcacag gtaccacgat gccccgaggc cacgcaccca cagactatgc ccgctggcgg
 1260
 gagctcaggc cccgtaccgt gtgcaatggg cggccaacta tgaaccctac gtggtggtgc
 1320
 cagcagactg tccccgctat gatcctcgct ttgtgggctt cggctg
 1366

<210> 3712

<211> 368

<212> PRT

<213> Homo sapiens

<400> 3712

Xaa	His	Phe	Ser	Asp	Thr	Gln	Ala	Ile	Gly	Leu	Val	Glu	Asn	Gln	Ser
1				5					10					15	
Asp	Trp	Tyr	Leu	Gly	Asn	Leu	Trp	Lys	Asn	His	Arg	Pro	Trp	Pro	Ala
			20					25					30		
Leu	Gly	Arg	Gly	Phe	Asn	Thr	Gly	Val	Ile	Leu	Leu	Arg	Leu	Asp	Arg
			35				40					45			
Leu	Arg	Gln	Ala	Gly	Trp	Glu	Gln	Met	Trp	Arg	Leu	Thr	Ala	Arg	Arg
			50				55					60			
Glu	Leu	Leu	Ser	Leu	Pro	Ala	Ala	Ser	Leu	Ala	Asp	Gln	Asp	Ile	Phe
						70				75				80	
Asn	Ala	Val	Ile	Lys	Glu	His	Pro	Gly	Leu	Val	Gln	Arg	Leu	Pro	Cys
				85					90					95	
Val	Trp	Asn	Val	Gln	Leu	Ser	Asp	His	Thr	Leu	Ala	Glu	Arg	Cys	Tyr
			100					105					110		
Ser	Glu	Ala	Ser	Asp	Leu	Lys	Val	Ile	His	Trp	Asn	Ser	Pro	Lys	Lys
			115				120					125			
Leu	Arg	Val	Lys	Asn	Lys	His	Val	Glu	Phe	Phe	Arg	Asn	Phe	Tyr	Leu
			130				135				140				
Thr	Phe	Leu	Glu	Tyr	Asp	Gly	Asn	Leu	Leu	Arg	Arg	Glu	Leu	Phe	Val
					150					155				160	
Cys	Pro	Ser	Gln	Pro	Pro	Pro	Gly	Ala	Glu	Gln	Leu	Gln	Gln	Ala	Leu
				165					170					175	
Ala	Gln	Leu	Asp	Glu	Glu	Asp	Pro	Cys	Phe	Glu	Phe	Arg	Gln	Gln	Gln
			180					185					190		
Leu	Thr	Val	His	Arg	Val	His	Val	Thr	Phe	Leu	Pro	His	Glu	Pro	Pro
			195				200					205			
Pro	Pro	Arg	Pro	His	Asp	Val	Thr	Leu	Val	Ala	Gln	Leu	Ser	Met	Asp
			210			215					220				
Arg	Leu	Gln	Met	Leu	Glu	Ala	Leu	Cys	Arg	His	Trp	Pro	Gly	Pro	Met

225		230		235		240									
Ser	Leu	Ala	Leu	Tyr	Leu	Thr	Asp	Ala	Glu	Ala	Gln	Gln	Phe	Leu	His
			245						250					255	
Phe	Val	Glu	Ala	Ser	Pro	Val	Leu	Ala	Ala	Arg	Gln	Asp	Val	Ala	Tyr
			260					265					270		
His	Val	Val	Tyr	Arg	Glu	Gly	Pro	Leu	Tyr	Pro	Val	Asn	Gln	Leu	Arg
		275					280					285			
Asn	Val	Ala	Leu	Ala	Gln	Ala	Leu	Thr	Pro	Tyr	Val	Phe	Leu	Ser	Asp
	290					295					300				
Ile	Asp	Phe	Leu	Pro	Ala	Tyr	Ser	Leu	Tyr	Asp	Tyr	Leu	Arg	Ala	Ser
305				310						315				320	
Ile	Glu	Gln	Leu	Gly	Leu	Gly	Ser	Arg	Arg	Lys	Ala	Ala	Leu	Val	Val
			325					330					335		
Pro	Ala	Phe	Glu	Thr	Leu	Arg	Tyr	Arg	Phe	Ser	Phe	Pro	His	Ser	Lys
			340					345					350		
Val	Glu	Leu	Leu	Ala	Leu	Leu	Asp	Ala	Gly	Thr	Leu	Tyr	Thr	Phe	Arg
		355					360						365		

<210> 3713

<211> 1719

<212> DNA

<213> Homo sapiens

<400> 3713

```

ccatgggaag tagaacgccg gctcgcatgc ctgcccgcgc gccagcctgc cgggtacggc
60
cttttcggcc ggggcttcca ggtcaaagaa ttgcctttg ccgctaccgc tttcttacc
120
tccgcacccg ttaagttctc cggtcgggcg gcagtctctg aacacttagc cgcgccatcc
180
ggggtcacac cgcctggaag gaggtgacgg gggcgggcgc gggcgcgggac actccccgct
240
gagagtccgc ctgccatgga ctcggaatat tacagcggcg accagtcaga tgatggtggt
300
gctaccccg tacaggatga acgggattca gggtcagacg gtgaggatga tgtaaagag
360
caacactccg gatcagacac tggaagtgtg gaacgtcatt cagagaatga aactagtgat
420
cgagaagatg gccccccaa aggacatcat gtgacagact ctgagaacga tgagccctta
480
aatcttaatg ctagtgactc tgaaagtgtg gagcttcaca ggcaaaagga cagcgactct
540
gaatctgagg aacgtgcaga gcctcctgca agcgattctg aaaatgagga tgtcaatcag
600
catgggagcg actctgagag tgaagagacc aggaaattac ctggtagtga ctctgaaaat
660
gaggaaacttc ttaatgggca tgcaagtgtg tcagaaaacg aagatgttgg gaagcatccc
720
gccagtgtat ctgagattga ggagctccag aagagtcctg ctagtgtactc tgaaacagaa
780
gatgtcttaa aacctcaaat cagtgtactc gagagtgtgg aacccccaa gcaccaagcc
840
agtgtactccg aaaatgagga gcctcccaa cctcgaatga gtgattctga aagtgtggag
900

```

cttcctaaac ctcaggtcag tgattcagaa agtgaggaac cccaaggca ccaggccagt
 960
 gactctgaaa atgaggagct tcccaaacct cgtatcagtg actcagaaag tgaggacctt
 1020
 ccgaggcacc aggccagtga ctcagaaaat gaagagcttc ccaaaccctg aatcagtgat
 1080
 tcggaaagtg aggatcccc aaggaaccag gccagtgatt cggaaaatga ggagctaccc
 1140
 aaaccccgag tcagtgactc tgagagtga gggcctcaga aggggcctgc cagtgactca
 1200
 gaaactgagg atgcgtccag acacaaacag aagccagagt cagatgatga cagcgacagg
 1260
 gagaataagg gagaggatac agaaatgcag aatgactcct tccattcaga cagccatatg
 1320
 gacagaaaaa agtttcacag ttctgatagt gaggaggaag aacacaaaaa gcaaaaaatg
 1380
 gacagtgatg aagatgaaaa agagggtgag gaggagaaag tagcgaagag aaaagctgct
 1440
 gtgctttctg atagtgaaga tgaagagaaa gcatcagcaa agaagagtcg tgttgtctct
 1500
 gatgcagatg actctgacag tgatgctgta tcagacaagt caggcaaaag agagaagacc
 1560
 atagcatctg acagtgagga agaagctggg aaagaattgt ctgataagaa aaatgaagag
 1620
 aaggatctgt ttgggagtga cagtgaagca ggcaatgaag aagaaaatct tattgcagac
 1680
 atatttgag aatctggtga tgaagaggaa gaagaattc
 1719

<210> 3714

<211> 488

<212> PRT

<213> Homo sapiens

<400> 3714

Met	Asp	Ser	Glu	Tyr	Tyr	Ser	Gly	Asp	Gln	Ser	Asp	Asp	Gly	Gly	Ala
1				5					10					15	
Thr	Pro	Val	Gln	Asp	Glu	Arg	Asp	Ser	Gly	Ser	Asp	Gly	Glu	Asp	Asp
			20					25					30		
Val	Asn	Glu	Gln	His	Ser	Gly	Ser	Asp	Thr	Gly	Ser	Val	Glu	Arg	His
			35					40				45			
Ser	Glu	Asn	Glu	Thr	Ser	Asp	Arg	Glu	Asp	Gly	Pro	Pro	Lys	Gly	His
			50					55			60				
His	Val	Thr	Asp	Ser	Glu	Asn	Asp	Glu	Pro	Leu	Asn	Leu	Asn	Ala	Ser
					70					75				80	
Asp	Ser	Glu	Ser	Glu	Glu	Leu	His	Arg	Gln	Lys	Asp	Ser	Asp	Ser	Glu
				85					90					95	
Ser	Glu	Glu	Arg	Ala	Glu	Pro	Pro	Ala	Ser	Asp	Ser	Glu	Asn	Glu	Asp
				100				105					110		
Val	Asn	Gln	His	Gly	Ser	Asp	Ser	Glu	Ser	Glu	Glu	Thr	Arg	Lys	Leu
			115					120					125		
Pro	Gly	Ser	Asp	Ser	Glu	Asn	Glu	Glu	Leu	Leu	Asn	Gly	His	Ala	Ser
						135					140				
Asp	Ser	Glu	Asn	Glu	Asp	Val	Gly	Lys	His	Pro	Ala	Ser	Asp	Ser	Glu

```

145          150          155          160
Ile Glu Glu Leu Gln Lys Ser Pro Ala Ser Asp Ser Glu Thr Glu Asp
          165          170          175
Ala Leu Lys Pro Gln Ile Ser Asp Ser Glu Ser Glu Glu Pro Pro Arg
          180          185          190
His Gln Ala Ser Asp Ser Glu Asn Glu Glu Pro Pro Lys Pro Arg Met
          195          200          205
Ser Asp Ser Glu Ser Glu Glu Leu Pro Lys Pro Gln Val Ser Asp Ser
          210          215          220
Glu Ser Glu Glu Pro Pro Arg His Gln Ala Ser Asp Ser Glu Asn Glu
225          230          235          240
Glu Leu Pro Lys Pro Arg Ile Ser Asp Ser Glu Ser Glu Asp Pro Pro
          245          250          255
Arg His Gln Ala Ser Asp Ser Glu Asn Glu Glu Leu Pro Lys Pro Arg
          260          265          270
Ile Ser Asp Ser Glu Ser Glu Asp Pro Pro Arg Asn Gln Ala Ser Asp
          275          280          285
Ser Glu Asn Glu Glu Leu Pro Lys Pro Arg Val Ser Asp Ser Glu Ser
          290          295          300
Glu Gly Pro Gln Lys Gly Pro Ala Ser Asp Ser Glu Thr Glu Asp Ala
305          310          315          320
Ser Arg His Lys Gln Lys Pro Glu Ser Asp Asp Ser Asp Arg Glu
          325          330          335
Asn Lys Gly Glu Asp Thr Glu Met Gln Asn Asp Ser Phe His Ser Asp
          340          345          350
Ser His Met Asp Arg Lys Lys Phe His Ser Ser Asp Ser Glu Glu Glu
          355          360          365
Glu His Lys Lys Gln Lys Met Asp Ser Asp Glu Asp Glu Lys Glu Gly
          370          375          380
Glu Glu Glu Lys Val Ala Lys Arg Lys Ala Ala Val Leu Ser Asp Ser
385          390          395          400
Glu Asp Glu Glu Lys Ala Ser Ala Lys Lys Ser Arg Val Val Ser Asp
          405          410          415
Ala Asp Asp Ser Asp Ser Asp Ala Val Ser Asp Lys Ser Gly Lys Arg
          420          425          430
Glu Lys Thr Ile Ala Ser Asp Ser Glu Glu Glu Ala Gly Lys Glu Leu
          435          440          445
Ser Asp Lys Lys Asn Glu Glu Lys Asp Leu Phe Gly Ser Asp Ser Glu
          450          455          460
Ser Gly Asn Glu Glu Glu Asn Leu Ile Ala Asp Ile Phe Gly Glu Ser
465          470          475          480
Gly Asp Glu Glu Glu Glu Phe
          485

```

<210> 3715

<211> 288

<212> DNA

<213> Homo sapiens

<400> 3715

ngccgcggcg cgggccccgc ggggggttaga ggtcaccatg ctgagggtcg cgtaaaggac

60

accacatccc tggaggctcg aattattgcc ttgtctggca agatccgcag ttatgaagaa

120

cacttgagaa aacatcgaaa ggacaaaagcc cacaaacgct atctgcta atgacattgac
 180
 cagaggaaaa agatgctcaa aaacctccgt aacaccaact atgatgtctt tgagaagata
 240
 tgctgggggc tgggaattga gtacaccttc cccctctgt attaccgn
 288

<210> 3716

<211> 96

<212> PRT

<213> Homo sapiens

<400> 3716

Xaa	Arg	Gly	Ala	Gly	Pro	Ala	Gly	Val	Arg	Gly	His	His	Ala	Glu	Gly
1				5					10					15	
Arg	Val	Lys	Asp	Thr	Thr	Ser	Leu	Glu	Ala	Arg	Ile	Ile	Ala	Leu	Ser
			20					25					30		
Gly	Lys	Ile	Arg	Ser	Tyr	Glu	Glu	His	Leu	Glu	Lys	His	Arg	Lys	Asp
		35				40						45			
Lys	Ala	His	Lys	Arg	Tyr	Leu	Leu	Met	Ser	Ile	Asp	Gln	Arg	Lys	Lys
	50					55				60					
Met	Leu	Lys	Asn	Leu	Arg	Asn	Thr	Asn	Tyr	Asp	Val	Phe	Glu	Lys	Ile
65				70					75					80	
Cys	Trp	Gly	Leu	Gly	Ile	Glu	Tyr	Thr	Phe	Pro	Pro	Leu	Tyr	Tyr	Arg
			85					90						95	

<210> 3717

<211> 1545

<212> DNA

<213> Homo sapiens

<400> 3717

ntgatcagga cagatgtgtc attattatgt gagagtgtgc atttacaagg gaaatgatta
 60
 tttcgcccca taaattattt taaaagctat ttattcgctt atgaacattt ttagagggga
 120
 taacatgggc cctcacaaca tcccaggag acaaaaacat agcagattta ataattctaat
 180
 ttagcaagat aaaagtgtgg atttttgtga aaggtacaca ttttctttaa caagtaaaag
 240
 tttcagatca ttattgatat ttacttattt taaagtaaag gcattacaca ctcaacattt
 300
 ggcctgatct gattttttaa cttcatccct aggattgata ttgctgatga tattattaat
 360
 gccagtgaag gtaacagaga ctgttcaaaa cctgtggcta gcactaattt agacaatgaa
 420
 gctatgcagc aagatttgtt atttgagaat gaagaaaata cccagtctgt aggtatattg
 480
 ttagagccat gcagtgaccg tggatgatgt gaagatggct gtcttgagag ggaagaatat
 540
 ttgttatttg acagtataa attgtcacac ttgattctgg attctagtag caagatatgt
 600
 gatttgaatg ccaacactga atcagaagta ccaggaggc agagtgttgg tgttcaaggg
 660

gaagcagcgt gtgtcagtat tccacattta gatctgaaga atgtttctga tgggtgataaa
 720
 tgggaagagc catttcctgc ttttaagtct tggcaggagg actctgagtc tggagaagct
 780
 cagctgtctc cacaagctgg aagaatgaat catcacccct tggaagagga ctgtcctcca
 840
 gtattatcac accgcagttt agattttggt caaagccagc gtttcctaca tgatccagaa
 900
 aagttggatt cctcatctaa agcactgtct ttactagaa ttcgaagatc atcctttagt
 960
 tcaaaagatg aaaagagaga ggacagaaca ccttatcagc tggtaagaa acttcagaag
 1020
 aaaatcagac aatttgagga acagtttgaa agggaaagaa atagcaagcc ctcctacagt
 1080
 gatattgctg ccaatccaaa ggtattaaaa tggatgacag agcttacaaa actgcggaag
 1140
 caaattaaag atgcaaaaca caaaaattct gatggagaat ttgtacctca gacacgtcca
 1200
 cgtagtaaca cacttccaaa aagctttggc tcttctctag accatgaaga tgaagagaat
 1260
 gaagatgaac ccaagggtcat tcagaaggag aaaaaacat ctaaagaagc aacccttgaa
 1320
 cttattctta aaagactgaa agaaaaacgt attgagaggt gtcttcaga agatatcaag
 1380
 aaaatgacca aagatcattt ggtagaagag aaagcttctc ttcagaaaag tcttctttac
 1440
 tatgaaagtc aacatggaag gccggtgacc aaggaagaaa ggcacattgt taaacctctc
 1500
 tatgatagat acaggcttgt aaaacaaatg ctgacaagag ctage
 1545

<210> 3718

<211> 374

<212> PRT

<213> Homo sapiens

<400> 3718

Met	Gln	Gln	Asp	Cys	Val	Phe	Glu	Asn	Glu	Glu	Asn	Thr	Gln	Ser	Val
1				5					10					15	
Gly	Ile	Leu	Leu	Glu	Pro	Cys	Ser	Asp	Arg	Gly	Asp	Ser	Glu	Asp	Gly
		20						25					30		
Cys	Leu	Glu	Arg	Glu	Glu	Tyr	Leu	Leu	Phe	Asp	Ser	Asp	Lys	Leu	Ser
		35					40					45			
His	Leu	Ile	Leu	Asp	Ser	Ser	Ser	Lys	Ile	Cys	Asp	Leu	Asn	Ala	Asn
	50					55					60				
Thr	Glu	Ser	Glu	Val	Pro	Gly	Gly	Gln	Ser	Val	Gly	Val	Gln	Gly	Glu
65				70					75				80		
Ala	Ala	Cys	Val	Ser	Ile	Pro	His	Leu	Asp	Leu	Lys	Asn	Val	Ser	Asp
			85					90					95		
Gly	Asp	Lys	Trp	Glu	Glu	Pro	Phe	Pro	Ala	Phe	Lys	Ser	Trp	Gln	Glu
		100					105						110		
Asp	Ser	Glu	Ser	Gly	Glu	Ala	Gln	Leu	Ser	Pro	Gln	Ala	Gly	Arg	Met
		115				120					125				
Asn	His	His	Pro	Leu	Glu	Glu	Asp	Cys	Pro	Pro	Val	Leu	Ser	His	Arg

130 135 140
 Ser Leu Asp Phe Gly Gln Ser Gln Arg Phe Leu His Asp Pro Glu Lys
 145 150 155 160
 Leu Asp Ser Ser Ser Lys Ala Leu Ser Phe Thr Arg Ile Arg Arg Ser
 165 170 175
 Ser Phe Ser Ser Lys Asp Glu Lys Arg Glu Asp Arg Thr Pro Tyr Gln
 180 185 190
 Leu Val Lys Lys Leu Gln Lys Lys Ile Arg Gln Phe Glu Glu Gln Phe
 195 200 205
 Glu Arg Glu Arg Asn Ser Lys Pro Ser Tyr Ser Asp Ile Ala Ala Asn
 210 215 220
 Pro Lys Val Leu Lys Trp Met Thr Glu Leu Thr Lys Leu Arg Lys Gln
 225 230 235 240
 Ile Lys Asp Ala Lys His Lys Asn Ser Asp Gly Glu Phe Val Pro Gln
 245 250 255
 Thr Arg Pro Arg Ser Asn Thr Leu Pro Lys Ser Phe Gly Ser Ser Leu
 260 265 270
 Asp His Glu Asp Glu Glu Asn Glu Asp Glu Pro Lys Val Ile Gln Lys
 275 280 285
 Glu Lys Lys Pro Ser Lys Glu Ala Thr Leu Glu Leu Ile Leu Lys Arg
 290 295 300
 Leu Lys Glu Lys Arg Ile Glu Arg Cys Leu Pro Glu Asp Ile Lys Lys
 305 310 315 320
 Met Thr Lys Asp His Leu Val Glu Glu Lys Ala Ser Leu Gln Lys Ser
 325 330 335
 Leu Leu Tyr Tyr Glu Ser Gln His Gly Arg Pro Val Thr Lys Glu Glu
 340 345 350
 Arg His Ile Val Lys Pro Leu Tyr Asp Arg Tyr Arg Leu Val Lys Gln
 355 360 365
 Met Leu Thr Arg Ala Ser
 370

<210> 3719

<211> 422

<212> DNA

<213> Homo sapiens

<400> 3719

nnnctatctgc gctgagtggg agtataataa aatacctcnn cactggggac tgggatggga
 60
 ttttgggctt ggctgctccg tggtttgatc tttcgcggtt tgcttgggtc ctacatgggt
 120
 gggcaaccag aaccccggtg gggaaagaat aaccaaaaaa agtttgagtg caacagtaga
 180
 cagcccggtt gcaaaaatgt gtgttttgat gacttcttcc ccatttccca agtcagactt
 240
 tgggccttac aactgataat ggtctccaca ctttcacttc tgggtggtttt acatgtagcc
 300
 tatcatgagg gtagagagaa aaggcacaga aagaaactct atgtcagccc aggtacaatg
 360
 gatgggggcc tatggtacgc ttatcttatc agcctcattg ttaaaactgg ttttgaaacn
 420
 nn
 422

<210> 3720
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3720
 Met Gly Phe Trp Ala Trp Leu Leu Arg Gly Leu Ile Phe Arg Gly Leu
 1 5 10 15
 Pro Gly Ser Tyr Met Gly Gly Gln Pro Glu Pro Arg Val Gly Lys Asn
 20 25 30
 Asn Gln Lys Lys Phe Glu Cys Asn Ser Arg Gln Pro Gly Cys Lys Asn
 35 40 45
 Val Cys Phe Asp Asp Phe Phe Pro Ile Ser Gln Val Arg Leu Trp Ala
 50 55 60
 Leu Gln Leu Ile Met Val Ser Thr Pro Ser Leu Leu Val Val Leu His
 65 70 75 80
 Val Ala Tyr His Glu Gly Arg Glu Lys Arg His Arg Lys Lys Leu Tyr
 85 90 95
 Val Ser Pro Gly Thr Met Asp Gly Gly Leu Trp Tyr Ala Tyr Leu Ile
 100 105 110
 Ser Leu Ile Val Lys Thr Gly Phe Glu Thr
 115 120

<210> 3721
 <211> 4728
 <212> DNA
 <213> Homo sapiens

<400> 3721
 agcgagaagg agaaggaaga gttggagcgg ctgcagaaag aggaggagga gaggaagaag
 60
 aggctgcagc tgtatgtgtt cgtgatgcgc tgcacgcctt acccctttaa tgccaagcag
 120
 cccaccgaca tggctcgccg gcagcagaag atcagcaaac agcagctgca gacagtcaag
 180
 gaccggtttc aggttttct caatggggaa acccagatca tggctgacga agccttcatg
 240
 aacgctgtgc agagttacta tgaggtgttc ctgaagagcg accgtgtggc ccgcatgggt
 300
 cagagtggag gctgttcgc caacgactcc cgggaggtct tcaagaagca cattgagaag
 360
 agagtgcgca gcctgcctga gattgacggc ctcagcaagg agactgtgct gagctcctgg
 420
 atggccaaat ttgatgccat ctaccgtgga gaagaggacc cgcggaagca gcaggcccgg
 480
 atgacagcca ggcgagcctc cgagctgatt ctgagcaagg agcaactcta tgagatgttc
 540
 cagaacattc ttgggatcaa gaagttcgaa catcagctcc ttacaatgc ctgccagctg
 600
 gacaatccag atgagcaagc agcccagatc agacgagagc tggatggacg tctacaaatg
 660
 gcagacaaaa tagccagggg acgcaaattt cccaagtttg tatccaaaga aatggaaaac
 720

atgtacattg aggagctgaa gtcattctgtc aacctgctca tggccaactt ggagagcatg
780
ccggtatcca aaggcgggga gttcaagctc cagaaactca aacgcagcca caatgcttcc
840
atcatcgaca tgggcgagga gagtgagaac cagctctcca agtcagatgt cgtgctgtct
900
ttctcattgg aggtggtaat tatggaagtc caaggcctca aatctttggc tccaaatcgc
960
atcgtatatt gcacaatgga ggtggaagga ggagagaaac tacagactga tcaggccgag
1020
gcttctaaac caacctgggg caccagggg gacttctcca caacccatgc actgccagct
1080
gtgaaggatga agctgttcac agagagcaca ggcgtcctgg cgttgaggga caaggagctt
1140
gggcgggtta ttctccatcc caccgccgaac agccccaac agtcagagtgc gcacaaaatg
1200
acagtctcca aaaactgccc caaccaagat ctcaaatca aacttgctgt ccgaatggat
1260
aagcctcaaa acatgaagca ttctgggtat ttatgggcca tcggtaagaa tgtctggaag
1320
agatggaaga aaaggttttt tgtattgggtg caggtcagtc agtacacgtt tgccatgtgc
1380
agttatcggg agaagaaagc ggagcctcag gaacttctac aattggatgg ctacactgtg
1440
gattacaccg acccccagcc aggtttggag ggtggccgag ccttcttcaa tgctgtcaag
1500
gaggagaca ccgtgatatt tgccagtgc gatgaacaag accgcatcct gtgggtccag
1560
gccatgtatc gggccacggg gcagtcacac aagcctgtgc ccccgacca agtccagaaa
1620
ctcaacgcca agggaggaaa tgtacctcag ctggatgccc ctatctctca attttctgga
1680
ctgaaggacg cagatagagc tcaaaaacat ggcattggatg aatttatctc ttccaacccc
1740
tgtaactttg accacgcttc cctctttgag atggtacaac gccttacttt ggatcacaga
1800
cttaatgatt cctattcttg cctgggctgg ttcagtcctg gccagggtgtt tgtactagac
1860
gagtattgag cccgaaatgg agtccggggg tgtcaccgac atctctgcta cctcagagac
1920
ttgcttgaac gggcagaaaa tggcgccatg atcgacccca ccttcttca ctacagcttt
1980
gccttctgtg catcccatgt ccatgggaac aggctgatg gaattggaac tgtgactgtt
2040
gaagaaaagg aacgttttga agaaatcaaa gagaggctcc gagttctgct agaaaatcag
2100
attacacatt ttaggtattg ctttccattt ggtcgacctg aagggtgctt gaaagctact
2160
ctctcactct tggaaagggt ttgatgaaa gatattgtta cccagtgcc acaagaggag
2220
gtaaaaacag ttatccgtaa atgtctggaa caggctgcgt tagtcaacta ttctcggctc
2280
tcagagtatg ccaaaatcga agagaatcaa aaggatgcag aaaatgtagg ccggttaac
2340

actcctgcc aaaaagcttga agatacaata cgtcttgctg aactagtc at tgaagttctt
2400
cagcaaaatg aggagcacca cgcagagcca catgttgata aaggagaggc ctttgcggtg
2460
tggtcagatt taatgggtgga gcatgcggag acgttcctgt cactctttgc agtagacatg
2520
gatgcagcct tagagggtgca acctccagac acatgggaca gttttccact atttcagctg
2580
ctgaatgatt ttctccgtac tgactataat ttgtgcaatg gaaaatttca caaacacctg
2640
caagacctgt ttgccccact tgttggttaga tatgtggatc tgatggagtc ctcaattgca
2700
caatccattc acaggggctt tgagcgggag tcatgggaac cagtcaataa tgggtcaggc
2760
acctcagaag atctgttttg gaaacttgac gcccttcaga ccttcattcg ggacctgcac
2820
tggcctgaag aagagtttgg aaagcacctg gaacaacggc tgaagttgat ggcaagtgc
2880
atgatcgaat cttgtgtcaa aagaaccagg attgcatttg aagttaagct gcaaaaaacc
2940
agtcgatcaa cagattttcg agtcccacag tcaatatgca ccatgtttta tgttatgggt
3000
gatgccaaag ctcaatcaac aaaactttgc agcatggaaa tgggccaaga gtttgctaaa
3060
atgtggcatc aataccattc aaaaatagac gaactaattg aagaaactgt taaagaaatg
3120
ataacactct tggttgcaaa gttcgttact atcttggaag gagtgctggc aaaattatcc
3180
agatatgacg aagggaactt gttttcttct tttctgtcat ttaccgtgaa ggcagcttcc
3240
aaatatgtgg atgtacctaa acccgggatg gacgtggccg acgcctacgt gactttcgtc
3300
cgccattctc aggatgtcct gcgtgataag gtcaatgagg agatgtacat agaaagggtta
3360
tttgatcaat ggtacaacag ctccatgaac gtgatctgca cctgggtgac ggaccggatg
3420
gacttacagc ttcataattta tcagttgaaa aactaatta ggatggtaaa gaaaacctac
3480
agagatttcc gattgcaagg ggtcctggac tccacctta acagcaagac ctatgaaacg
3540
atccggaacc gtctcactgt ggaggaagcc acagcatcag tgagtgaagg tgggggactg
3600
cagggcatca gcatgaagga cagcgatgag gaagacgaag aagacgatta gaccatttgg
3660
tcctagagtc tgctgggaca gagtcctgta atcagtgc at gtccttagtc tgttagttaa
3720
accattagg aattttctgt caactaccat gccatgaga tgtttatcaa tacaactgcc
3780
atttagcta tgtggtacca agattagcaa atgacctca tatccactga tttcctgatg
3840
tccatgtcta tatgtttaca agcaatatgg agcaccattc tttaaatact gttcatggag
3900
aatacatagt ctaaccacta ggcgtgtccc tgttatcagc aaagatcaat gatgcttcat
3960

tcatgtacta tgtatgcatt ggtggtaa at ggatgtgagg gcaagtacat caagtacatt
 4020
 cactctgttt cacgtatgtg gatgccagtt aattaaatga gtacgtaaat aaattaatta
 4080
 aaacacatag atctgctttg tgtttttatt tttatTTTTT gaaaaacaaa aggcaagtct
 4140
 ccaacaatta acttttgatg ctttctgttc ccctaaaacc aaaaaatgaa ccccttgtgt
 4200
 cgttggttaac ccaccttttc atttactcat ataattagcc aaaaaaaaaa ggatggctac
 4260
 ataccaatgg attgattctc ttaattgcc a cggaagggg gcgatcctat catgacttaa
 4320
 catcaagcgc gcagttcaaa actactgtct tctgtcaaag ttttctctc ttaaagtta
 4380
 ttttgctttt acgtctcaac tgtgtatgta aaaaaaacga atatttaa at tacaacccta
 4440
 gactaaaaat gtgtttataa taagatgtgg atatttcctt cagtagattg taaccataat
 4500
 ttaaattatt ttgttcaca ctgtttttta tatctgtcat gtacattgca ttttgatctg
 4560
 taactgcaca accctggggg ttgctgcaga gctatttctt tccatgtaaa gtagtggatc
 4620
 catcttgctt ttgccttata taaagcctac agttatggaa gtgtggaaaa ctgtggcttc
 4680
 tcaataaata ttcagatgtc ctaagaataa aaaaaaaaaa aaaaaaaaaa
 4728

<210> 3722

<211> 1216

<212> PRT

<213> Homo sapiens

<400> 3722

Ser	Glu	Lys	Glu	Lys	Glu	Glu	Leu	Glu	Arg	Leu	Gln	Lys	Glu	Glu	Glu
1				5					10					15	
Glu	Arg	Lys	Lys	Arg	Leu	Gln	Leu	Tyr	Val	Phe	Val	Met	Arg	Cys	Ile
			20					25					30		
Ala	Tyr	Pro	Phe	Asn	Ala	Lys	Gln	Pro	Thr	Asp	Met	Ala	Arg	Arg	Gln
			35				40					45			
Gln	Lys	Ile	Ser	Lys	Gln	Gln	Leu	Gln	Thr	Val	Lys	Asp	Arg	Phe	Gln
		50				55					60				
Ala	Phe	Leu	Asn	Gly	Glu	Thr	Gln	Ile	Met	Ala	Asp	Glu	Ala	Phe	Met
65					70					75					80
Asn	Ala	Val	Gln	Ser	Tyr	Tyr	Glu	Val	Phe	Leu	Lys	Ser	Asp	Arg	Val
			85						90					95	
Ala	Arg	Met	Val	Gln	Ser	Gly	Gly	Cys	Ser	Ala	Asn	Asp	Ser	Arg	Glu
			100					105					110		
Val	Phe	Lys	Lys	His	Ile	Glu	Lys	Arg	Val	Arg	Ser	Leu	Pro	Glu	Ile
		115				120						125			
Asp	Gly	Leu	Ser	Lys	Glu	Thr	Val	Leu	Ser	Ser	Trp	Met	Ala	Lys	Phe
		130				135					140				
Asp	Ala	Ile	Tyr	Arg	Gly	Glu	Glu	Asp	Pro	Arg	Lys	Gln	Gln	Ala	Arg
145					150					155					160
Met	Thr	Ala	Ser	Ala	Ala	Ser	Glu	Leu	Ile	Leu	Ser	Lys	Glu	Gln	Leu

					165					170					175	
Tyr	Glu	Met	Phe	Gln	Asn	Ile	Leu	Gly	Ile	Lys	Lys	Phe	Glu	His	Gln	
			180					185					190			
Leu	Leu	Tyr	Asn	Ala	Cys	Gln	Leu	Asp	Asn	Pro	Asp	Glu	Gln	Ala	Ala	
		195					200					205				
Gln	Ile	Arg	Arg	Glu	Leu	Asp	Gly	Arg	Leu	Gln	Met	Ala	Asp	Gln	Ile	
	210					215					220					
Ala	Arg	Glu	Arg	Lys	Phe	Pro	Lys	Phe	Val	Ser	Lys	Glu	Met	Glu	Asn	
225					230					235					240	
Met	Tyr	Ile	Glu	Glu	Leu	Lys	Ser	Ser	Val	Asn	Leu	Leu	Met	Ala	Asn	
				245					250					255		
Leu	Glu	Ser	Met	Pro	Val	Ser	Lys	Gly	Gly	Glu	Phe	Lys	Leu	Gln	Lys	
			260					265					270			
Leu	Lys	Arg	Ser	His	Asn	Ala	Ser	Ile	Ile	Asp	Met	Gly	Glu	Glu	Ser	
		275					280					285				
Glu	Asn	Gln	Leu	Ser	Lys	Ser	Asp	Val	Val	Leu	Ser	Phe	Ser	Leu	Glu	
	290					295					300					
Val	Val	Ile	Met	Glu	Val	Gln	Gly	Leu	Lys	Ser	Leu	Ala	Pro	Asn	Arg	
305					310					315					320	
Ile	Val	Tyr	Cys	Thr	Met	Glu	Val	Glu	Gly	Gly	Glu	Lys	Leu	Gln	Thr	
				325					330					335		
Asp	Gln	Ala	Glu	Ala	Ser	Lys	Pro	Thr	Trp	Gly	Thr	Gln	Gly	Asp	Phe	
			340					345					350			
Ser	Thr	Thr	His	Ala	Leu	Pro	Ala	Val	Lys	Val	Lys	Leu	Phe	Thr	Glu	
		355					360					365				
Ser	Thr	Gly	Val	Leu	Ala	Leu	Glu	Asp	Lys	Glu	Leu	Gly	Arg	Val	Ile	
		370				375					380					
Leu	His	Pro	Thr	Pro	Asn	Ser	Pro	Lys	Gln	Ser	Glu	Trp	His	Lys	Met	
385					390					395					400	
Thr	Val	Ser	Lys	Asn	Cys	Pro	Asn	Gln	Asp	Leu	Lys	Ile	Lys	Leu	Ala	
				405					410					415		
Val	Arg	Met	Asp	Lys	Pro	Gln	Asn	Met	Lys	His	Ser	Gly	Tyr	Leu	Trp	
			420					425					430			
Ala	Ile	Gly	Lys	Asn	Val	Trp	Lys	Arg	Trp	Lys	Lys	Arg	Phe	Phe	Val	
		435					440					445				
Leu	Val	Gln	Val	Ser	Gln	Tyr	Thr	Phe	Ala	Met	Cys	Ser	Tyr	Arg	Glu	
		450				455					460					
Lys	Lys	Ala	Glu	Pro	Gln	Glu	Leu	Leu	Gln	Leu	Asp	Gly	Tyr	Thr	Val	
465					470					475					480	
Asp	Tyr	Thr	Asp	Pro	Gln	Pro	Gly	Leu	Glu	Gly	Gly	Arg	Ala	Phe	Phe	
				485					490					495		
Asn	Ala	Val	Lys	Glu	Gly	Asp	Thr	Val	Ile	Phe	Ala	Ser	Asp	Asp	Glu	
			500					5								

595					600					605					
Gly	Trp	Phe	Ser	Pro	Gly	Gln	Val	Phe	Val	Leu	Asp	Glu	Tyr	Cys	Ala
610					615					620					
Arg	Asn	Gly	Val	Arg	Gly	Cys	His	Arg	His	Leu	Cys	Tyr	Leu	Arg	Asp
625					630					635					640
Leu	Leu	Glu	Arg	Ala	Glu	Asn	Gly	Ala	Met	Ile	Asp	Pro	Thr	Leu	Leu
				645					650					655	
His	Tyr	Ser	Phe	Ala	Phe	Cys	Ala	Ser	His	Val	His	Gly	Asn	Arg	Pro
			660					665					670		
Asp	Gly	Ile	Gly	Thr	Val	Thr	Val	Glu	Glu	Lys	Glu	Arg	Phe	Glu	Glu
	675					680					685				
Ile	Lys	Glu	Arg	Leu	Arg	Val	Leu	Leu	Glu	Asn	Gln	Ile	Thr	His	Phe
690					695					700					
Arg	Tyr	Cys	Phe	Pro	Phe	Gly	Arg	Pro	Glu	Gly	Ala	Leu	Lys	Ala	Thr
705					710					715					720
Leu	Ser	Leu	Leu	Glu	Arg	Val	Leu	Met	Lys	Asp	Ile	Val	Thr	Pro	Val
				725					730					735	
Pro	Gln	Glu	Glu	Val	Lys	Thr	Val	Ile	Arg	Lys	Cys	Leu	Glu	Gln	Ala
				740				745					750		
Ala	Leu	Val	Asn	Tyr	Ser	Arg	Leu	Ser	Glu	Tyr	Ala	Lys	Ile	Glu	Glu
	755					760					765				
Asn	Gln	Lys	Asp	Ala	Glu	Asn	Val	Gly	Arg	Leu	Ile	Thr	Pro	Ala	Lys
770					775					780					
Lys	Leu	Glu	Asp	Thr	Ile	Arg	Leu	Ala	Glu	Leu	Val	Ile	Glu	Val	Leu
785					790					795					800
Gln	Gln	Asn	Glu	Glu	His	His	Ala	Glu	Pro	His	Val	Asp	Lys	Gly	Glu
				805					810					815	
Ala	Phe	Ala	Trp	Trp	Ser	Asp	Leu	Met	Val	Glu	His	Ala	Glu	Thr	Phe
			820					825					830		
Leu	Ser	Leu	Phe	Ala	Val	Asp	Met	Asp	Ala	Ala	Leu	Glu	Val	Gln	Pro
	835						840				845				
Pro	Asp	Thr	Trp	Asp	Ser	Phe	Pro	Leu	Phe	Gln	Leu	Leu	Asn	Asp	Phe
	850				855					860					
Leu	Arg	Thr	Asp	Tyr	Asn	Leu	Cys	Asn	Gly	Lys	Phe	His	Lys	His	Leu
865					870					875					880
Gln	Asp	Leu	Phe	Ala	Pro	Leu	Val	Val	Arg	Tyr	Val	Asp	Leu	Met	Glu
			885						890					895	
Ser	Ser	Ile	Ala	Gln	Ser	Ile	His	Arg	Gly	Phe	Glu	Arg	Glu	Ser	Trp
			900					905					910		
Glu	Pro	Val	Asn	Asn	Gly	Ser	Gly	Thr	Ser	Glu	Asp	Leu	Phe	Trp	Lys
	915						920				925				
Leu	Asp	Ala	Leu	Gln	Thr	Phe	Ile	Arg	Asp	Leu	His	Trp	Pro	Glu	Glu
	930					935					940				
Glu	Phe	Gly	Lys	His	Leu	Glu	Gln	Arg	Leu	Lys	Leu	Met	Ala	Ser	Asp
945					950					955					960
Met	Ile	Glu	Ser	Cys	Val	Lys	Arg	Thr	Arg	Ile	Ala	Phe	Glu	Val	Lys
			965						970					975	
Leu	Gln	Lys	Thr	Ser	Arg	Ser	Thr	Asp	Phe	Arg	Val	Pro	Gln	Ser	Ile
			980					985					990		
Cys	Thr	Met	Phe	Asn	Val	Met	Val	Asp	Ala	Lys	Ala	Gln	Ser	Thr	Lys
	995						1000					1005			
Leu	Cys	Ser	Met	Glu	Met	Gly	Gln	Glu	Phe	Ala	Lys	Met	Trp	His	Gln
	1010					1015					1020				
Tyr	His	Ser	Lys	Ile	Asp	Glu	Leu	Ile	Glu	Glu	Thr	Val	Lys	Glu	Met

1025		1030		1035		1040
Ile Thr Leu Leu Val Ala Lys Phe Val Thr Ile Leu Glu Gly Val Leu						
	1045		1050		1055	
Ala Lys Leu Ser Arg Tyr Asp Glu Gly Thr Leu Phe Ser Ser Phe Leu						
	1060		1065		1070	
Ser Phe Thr Val Lys Ala Ala Ser Lys Tyr Val Asp Val Pro Lys Pro						
	1075		1080		1085	
Gly Met Asp Val Ala Asp Ala Tyr Val Thr Phe Val Arg His Ser Gln						
	1090		1095		1100	
Asp Val Leu Arg Asp Lys Val Asn Glu Glu Met Tyr Ile Glu Arg Leu						
1105		1110		1115		1120
Phe Asp Gln Trp Tyr Asn Ser Ser Met Asn Val Ile Cys Thr Trp Leu						
	1125		1130		1135	
Thr Asp Arg Met Asp Leu Gln Leu His Ile Tyr Gln Leu Lys Thr Leu						
	1140		1145		1150	
Ile Arg Met Val Lys Lys Thr Tyr Arg Asp Phe Arg Leu Gln Gly Val						
	1155		1160		1165	
Leu Asp Ser Thr Leu Asn Ser Lys Thr Tyr Glu Thr Ile Arg Asn Arg						
	1170		1175		1180	
Leu Thr Val Glu Glu Ala Thr Ala Ser Val Ser Glu Gly Gly Gly Leu						
1185		1190		1195		1200
Gln Gly Ile Ser Met Lys Asp Ser Asp Glu Glu Asp Glu Glu Asp Asp						
	1205		1210		1215	

<210> 3723

<211> 830

<212> DNA

<213> Homo sapiens

<400> 3723

```

atcctcttga tgcacaagat gagggttttg cacctggacc tcaagccaga gaacatcctg
60
tgtgtcaaca ccaccgggca tttggtgaag atcattgact ttggcctggc acggaggtat
120
aaccccaacg agaagctgaa ggtgaacttt gggaccccag agttcctgtc acctgaggtg
180
gtgaattatg accaaatctc cgataagaca gacatgtgga gtatgggggt gatcacctac
240
atgctgctga gcggcctctc ccccttctct ggagatgatg acacagagac cctaaacaac
300
gttctatctg gcaactggta ctttgatgaa gagacctttg aggccgtatc agacgaggcc
360
aaagactttg tctccaacct catcgtcaag gaccagaggg cccggatgaa cgctgcccag
420
tgtctcgccc atccctgggt caacaacctg gcggagaaaag ccaaacgctg taaccgacgc
480
cttaagtccc agatcttgct taagaaatac ctcattgaaga ggcgctggaa gaaaaacttc
540
attgctgtca gcgctgccaa ccgcttcaag aagatcagca gctcggggggc actgatggct
600
ctgggggtct gagccctggg gcgagctgaa gcctggacgc agccacacag tggccggggc
660
tgaagccaca cagcccagaa ggccagaaaa ggcagccaga tccccagggc agcctcggtta
720

```

ggacaaggct gtgccaggct gggaggctcg gggctcccca cgcccccatg cagtgaccgc
 780
 ttccccgatg tgagccgcct cggagtgtgg cctggatcca tctgctagc
 830

<210> 3724
 <211> 203
 <212> PRT
 <213> Homo sapiens

<400> 3724
 Ile Leu Leu Met His Lys Met Arg Val Leu His Leu Asp Leu Lys Pro
 1 5 10 15
 Glu Asn Ile Leu Cys Val Asn Thr Thr Gly His Leu Val Lys Ile Ile
 20 25 30
 Asp Phe Gly Leu Ala Arg Arg Tyr Asn Pro Asn Glu Lys Leu Lys Val
 35 40 45
 Asn Phe Gly Thr Pro Glu Phe Leu Ser Pro Glu Val Val Asn Tyr Asp
 50 55 60
 Gln Ile Ser Asp Lys Thr Asp Met Trp Ser Met Gly Val Ile Thr Tyr
 65 70 75 80
 Met Leu Leu Ser Gly Leu Ser Pro Phe Leu Gly Asp Asp Asp Thr Glu
 85 90 95
 Thr Leu Asn Asn Val Leu Ser Gly Asn Trp Tyr Phe Asp Glu Glu Thr
 100 105 110
 Phe Glu Ala Val Ser Asp Glu Ala Lys Asp Phe Val Ser Asn Leu Ile
 115 120 125
 Val Lys Asp Gln Arg Ala Arg Met Asn Ala Ala Gln Cys Leu Ala His
 130 135 140
 Pro Trp Leu Asn Asn Leu Ala Glu Lys Ala Lys Arg Cys Asn Arg Arg
 145 150 155 160
 Leu Lys Ser Gln Ile Leu Leu Lys Lys Tyr Leu Met Lys Arg Arg Trp
 165 170 175
 Lys Lys Asn Phe Ile Ala Val Ser Ala Ala Asn Arg Phe Lys Lys Ile
 180 185 190
 Ser Ser Ser Gly Ala Leu Met Ala Leu Gly Val
 195 200

<210> 3725
 <211> 1244
 <212> DNA
 <213> Homo sapiens

<400> 3725
 ngaattcatg tgtcaggtaa ggatattaca aggaaacctg agattttctgg gcatgtaatt
 60
 tctgtctcatg gcttatcagt cttgaatctg cgggatggaa gagagctgga tttcagatct
 120
 gaccatcttc acttttgttt tcaggccttt aaaattgtgc cctacaacac agagaccctt
 180
 gataaactgc taaccgaatc cctgaagaac aatatccctg caagcggact gcacctcttt
 240
 ggaatcaacc agctggaaga agaagatatg atgacaaatc agagggatga agagctgccc
 300

accctgttgc attttgctgc gaagtatgga ctgaagaacc tcaactgcctt gttgctcacc
 360
 tgcccaggag ccttcgaggc gtacagcgtg gccacaagc atggccacta ccccaacacc
 420
 atcgctgaga aacacggctt cagggacctg cggcagttca tcgacgagta tgtggaaacg
 480
 gtggacatgc tcaagagtca cattaagag gaactgatgc acggggagga ggctgatgct
 540
 gtgtacgagt ccatggccca cctttccaca gacctgctta tgaaatgctc gctcaacccc
 600
 ggctgtgacg aggatctcta tgagtccatg gctgcctttg tcccagctgc cactgaagac
 660
 ctctatgttg aaatgcttca ggccagtaca tctaaccctaa tccctggaga tggtttctct
 720
 cgggccacta aggactctat gatccgcaag tttttagaag gcaacagcat gggaatgacc
 780
 aatctggaga gagatcagtg ccatcttggt caggaagaag atgtttatca cacggtggat
 840
 gacgatgagg ctttttctgt ggacttggtc agcaggcccc ctgtcccagt gcccagacca
 900
 gagaccactg ctcttggtgc tcaccagctg cctgacaacg aaccatacat ttttaaaggc
 960
 aagtatggca gggaatgatg tccaactggt tctttggagc ttctcaacag ggatttctctg
 1020
 gatgacctgg ctttttgaac cattgctcag agactatccc cttctaaatg gtcttcaccc
 1080
 agccctacga gacaggggtc atatcctggg gccagattct ggagctagaa taggagtaat
 1140
 gaccagagtc agtgctggcc ttcttggaag tatttacgca cagttgcaaa ggcaggtaaa
 1200
 caagaccctt gatatatattt tatctcctga accccttcac gcgt
 1244

<210> 3726

<211> 325

<212> PRT

<213> Homo sapiens

<400> 3726

Xaa	Ile	His	Val	Ser	Gly	Lys	Asp	Ile	Thr	Arg	Lys	Pro	Glu	Ile	Ser
1				5				10					15		
Gly	His	Val	Ile	Ser	Ala	His	Gly	Leu	Ser	Val	Leu	Asn	Leu	Arg	Asp
		20					25					30			
Gly	Arg	Glu	Leu	Asp	Phe	Arg	Ser	Asp	His	Leu	His	Phe	Cys	Phe	Gln
	35					40					45				
Ala	Phe	Lys	Ile	Val	Pro	Tyr	Asn	Thr	Glu	Thr	Leu	Asp	Lys	Leu	Leu
	50					55				60					
Thr	Glu	Ser	Leu	Lys	Asn	Asn	Ile	Pro	Ala	Ser	Gly	Leu	His	Leu	Phe
65				70					75					80	
Gly	Ile	Asn	Gln	Leu	Glu	Glu	Glu	Asp	Met	Met	Thr	Asn	Gln	Arg	Asp
			85					90					95		
Glu	Glu	Leu	Pro	Thr	Leu	Leu	His	Phe	Ala	Ala	Lys	Tyr	Gly	Leu	Lys
		100					105					110			
Asn	Leu	Thr	Ala	Leu	Leu	Leu	Thr	Cys	Pro	Gly	Ala	Leu	Gln	Ala	Tyr

[illegible]

<210> 3727

<211> 630

<212> DNA

<213> Homo sapiens

<400> 3727

cggtattcgag	tcatcaagaa	gaaaaagggtc	attatgaaga	agcgggaagaa	gctaactcta
60					
actgccccca	ccccactggt	gactgccggg	cccccttgtga	ccccactcc	agcagggacc
120					
ctcgaccccg	ctgagaaaca	agaaacaggc	tgtcctcctt	tgggtctgga	gtccctgcga
180					
gtttcagata	gccggcttga	ggcatccagc	agccagtcct	ttgggtcttgg	accacaccga
240					
ggacggctca	acattcagtc	aggcctggag	gacggcgatc	tatatgatgg	agcctgggtgt
300					
gctgaggagc	aggacgccga	tccatggttt	caggtggacg	ctgggcaccc	caccgccttc
360					
tcgggtgtta	tcacacaggg	caggaactct	gtctggaggt	atgactgggt	cacatcatac
420					
aaggtccagt	tcagcaatga	cagtcggacc	tggtggggaa	gtaggaacca	cagcagtggt
480					
atggacgcag	tatttctctg	caattcagac	ccagaaactc	cagtgtctgaa	cctcctgcct
540					
gagccccagg	tggcccgtt	cattcgcttg	ctgccccaga	cctgggtcca	gggagggcgt
600					

ccttgccctcc gggcagagat cctggcctgc
630

<210> 3728

<211> 210

<212> PRT

<213> Homo sapiens

<400> 3728

Arg	Ile	Arg	Val	Ile	Lys	Lys	Lys	Lys	Val	Ile	Met	Lys	Lys	Arg	Lys
1				5					10					15	
Lys	Leu	Thr	Leu	Thr	Arg	Pro	Thr	Pro	Leu	Val	Thr	Ala	Gly	Pro	Leu
			20					25					30		
Val	Thr	Pro	Thr	Pro	Ala	Gly	Thr	Leu	Asp	Pro	Ala	Glu	Lys	Gln	Glu
		35				40						45			
Thr	Gly	Cys	Pro	Pro	Leu	Gly	Leu	Glu	Ser	Leu	Arg	Val	Ser	Asp	Ser
	50					55					60				
Arg	Leu	Glu	Ala	Ser	Ser	Gln	Ser	Phe	Gly	Leu	Gly	Pro	His	Arg	
65				70				75					80		
Gly	Arg	Leu	Asn	Ile	Gln	Ser	Gly	Leu	Glu	Asp	Gly	Asp	Leu	Tyr	Asp
			85					90					95		
Gly	Ala	Trp	Cys	Ala	Glu	Glu	Gln	Asp	Ala	Asp	Pro	Trp	Phe	Gln	Val
			100					105					110		
Asp	Ala	Gly	His	Pro	Thr	Arg	Phe	Ser	Gly	Val	Ile	Thr	Gln	Gly	Arg
		115					120					125			
Asn	Ser	Val	Trp	Arg	Tyr	Asp	Trp	Val	Thr	Ser	Tyr	Lys	Val	Gln	Phe
	130					135					140				
Ser	Asn	Asp	Ser	Arg	Thr	Trp	Trp	Gly	Ser	Arg	Asn	His	Ser	Ser	Gly
145				150						155				160	
Met	Asp	Ala	Val	Phe	Pro	Ala	Asn	Ser	Asp	Pro	Glu	Thr	Pro	Val	Leu
			165					170					175		
Asn	Leu	Leu	Pro	Glu	Pro	Gln	Val	Ala	Arg	Phe	Ile	Arg	Leu	Leu	Pro
			180					185					190		
Gln	Thr	Trp	Leu	Gln	Gly	Gly	Ala	Pro	Cys	Leu	Arg	Ala	Glu	Ile	Leu
		195					200						205		
Ala	Cys														
	210														

<210> 3729

<211> 1552

<212> DNA

<213> Homo sapiens

<400> 3729

naggaaacgc tttgtctgtc cggcaagccg acggcccgc gctggcctcc gtgacgcggg
60
cctcctccgc gcctcgcggc atggagtaga aagggaccgc ggaagcccg aagcgaaggc
120
atcaagttat cagcagatgt caaaccattt gtccccagat ttgccgggct caatgtggca
180
tggttagagt cctcagaagc atgtgtcttc ccagctctg cagccacata ctatccgttt
240
gttcaggaac caccagtgac agagcagaaa atatatactg aagacatggc ctttggagct
300

tcaacttttc cacctcagta tttatcttct gagataactc ttcattccata tgcctattct
 360
 ccttataccc ttgactccac acagaatgtt tactcagtgc ctggctccca gtatctttat
 420
 aaccaaccca gttgttaccg aggttttcaa acagtgaagc atcgaaatga gaacacatgc
 480
 cctctccac aagaaatgaa agctctgttt aagaagaaaa cctatgatga gaaaaaacg
 540
 tatgatcagc aaaagtgtga cagtgaagg gctgatggaa ctatatcatc tgagataaaa
 600
 tcagctagag gttcacatca tttgtccatt tacgctgaga atagtttgaa atcagatggt
 660
 taccataagc gaacagacag gaaatccaga atcattgcaa aaaatgtatc tacctccaaa
 720
 cctgagtttg aatttaccac actggacttt cctgaactgc aagggtgcaga gaacaatatg
 780
 tcagagatac agaagcaacc caagtgggga cctgtccact ctgtctctac cgacatttct
 840
 cttctaagag aagtagtaaa accagctgca gtgttatcaa agggtgaaat agtggtgaaa
 900
 aataacccaa atgaatctgt aactgcta atgccgtacca attctccttc atgtacaaga
 960
 gagttatctt ggacaccaat gggttatgtt gttcgacaga cattatctac agaactgtca
 1020
 gcagccccta aaaatgttac ttctatgata aacttaaaga ccattgcttc atcagcagat
 1080
 cctaaaaatg ttagtatacc atcttctgaa gctttatctt cggatccttc ctacaacaaa
 1140
 gaaaaacaca ttattcatcc taccctaaaag tctaaagcat cacaaggtag tgacctgaa
 1200
 caaatgaag cctcaagaaa gaataagaaa aagaagaaa aatctacatc aaaatatgaa
 1260
 gtcttgacag ttcaagagcc tccaaggatt gaagatgccg aggaatttcc caacctggca
 1320
 gttgcatctg aaagaagaga cagaatagag acaccgaaat ttcaatctaa gcagcagcca
 1380
 caggataatt ttaaaaataa tgtaaagaag agccagcttc cagtgcagtt ggacttgggg
 1440
 ggcattgctga cagccctgga gaagaagcag cactctcagc atgcaaagca gtcttccaaa
 1500
 ccagtggtag tctcagttgg agcagtgccg gtcctttcca aagaatgtgc ac
 1552

<210> 3730

<211> 422

<212> PRT

<213> Homo sapiens

<400> 3730

Met	Ala	Phe	Gly	Ala	Ser	Thr	Phe	Pro	Pro	Gln	Tyr	Leu	Ser	Ser	Glu
1			5					10					15		
Ile	Thr	Leu	His	Pro	Tyr	Ala	Tyr	Ser	Pro	Tyr	Thr	Leu	Asp	Ser	Thr
		20						25					30		
Gln	Asn	Val	Tyr	Ser	Val	Pro	Gly	Ser	Gln	Tyr	Leu	Tyr	Asn	Gln	Pro

	35					40					45				
Ser	Cys	Tyr	Arg	Gly	Phe	Gln	Thr	Val	Lys	His	Arg	Asn	Glu	Asn	Thr
	50					55					60				
Cys	Pro	Leu	Pro	Gln	Glu	Met	Lys	Ala	Leu	Phe	Lys	Lys	Lys	Thr	Tyr
65				70						75					80
Asp	Glu	Lys	Lys	Thr	Tyr	Asp	Gln	Gln	Lys	Phe	Asp	Ser	Glu	Arg	Ala
				85					90					95	
Asp	Gly	Thr	Ile	Ser	Ser	Glu	Ile	Lys	Ser	Ala	Arg	Gly	Ser	His	His
			100					105					110		
Leu	Ser	Ile	Tyr	Ala	Glu	Asn	Ser	Leu	Lys	Ser	Asp	Gly	Tyr	His	Lys
		115					120					125			
Arg	Thr	Asp	Arg	Lys	Ser	Arg	Ile	Ile	Ala	Lys	Asn	Val	Ser	Thr	Ser
	130					135					140				
Lys	Pro	Glu	Phe	Glu	Phe	Thr	Thr	Leu	Asp	Phe	Pro	Glu	Leu	Gln	Gly
145				150						155					160
Ala	Glu	Asn	Asn	Met	Ser	Glu	Ile	Gln	Lys	Gln	Pro	Lys	Trp	Gly	Pro
				165					170					175	
Val	His	Ser	Val	Ser	Thr	Asp	Ile	Ser	Leu	Leu	Arg	Glu	Val	Val	Lys
			180					185					190		
Pro	Ala	Ala	Val	Leu	Ser	Lys	Gly	Glu	Ile	Val	Val	Lys	Asn	Asn	Pro
		195					200					205			
Asn	Glu	Ser	Val	Thr	Ala	Asn	Ala	Ala	Thr	Asn	Ser	Pro	Ser	Cys	Thr
	210					215					220				
Arg	Glu	Leu	Ser	Trp	Thr	Pro	Met	Gly	Tyr	Val	Val	Arg	Gln	Thr	Leu
225				230						235					240
Ser	Thr	Glu	Leu	Ser	Ala	Ala	Pro	Lys	Asn	Val	Thr	Ser	Met	Ile	Asn
				245					250					255	
Leu	Lys	Thr	Ile	Ala	Ser	Ser	Ala	Asp	Pro	Lys	Asn	Val	Ser	Ile	Pro
			260					265					270		
Ser	Ser	Glu	Ala	Leu	Ser	Ser	Asp	Pro	Ser	Tyr	Asn	Lys	Glu	Lys	His
		275					280					285			
Ile	Ile	His	Pro	Thr	Gln	Lys	Ser	Lys	Ala	Ser	Gln	Gly	Ser	Asp	Leu
	290					295					300				
Glu	Gln	Asn	Glu	Ala	Ser	Arg	Lys	Asn	Lys	Lys	Lys	Lys	Glu	Lys	Ser
305				310						315					320
Thr	Ser	Lys	Tyr	Glu	Val	Leu	Thr	Val	Gln	Glu	Pro	Pro	Arg	Ile	Glu
				325					330					335	
Asp	Ala	Glu	Glu	Phe	Pro	Asn	Leu	Ala	Val	Ala	Ser	Glu	Arg	Arg	Asp
				340				345					350		
Arg	Ile	Glu	Thr	Pro	Lys	Phe	Gln	Ser	Lys	Gln	Gln	Pro	Gln	Asp	Asn
		355					360					365			
Phe	Lys	Asn	Asn	Val	Lys	Lys	Ser	Gln	Leu	Pro	Val	Gln	Leu	Asp	Leu
	370					375					380				
Gly	Gly	Met	Leu	Thr	Ala	Leu	Glu	Lys	Lys	Gln	His	Ser	Gln		

<210> 3731

<211> 1704

<212> DNA

<213> Homo sapiens

<400> 3731

tacgtgctca gaaacctcta cgtccccaac cggaagggtga agtccctgtg ctgggcctcg
60
ctgaaccagt tggactctca cgttctgctg tgcttcgagg gaatcacaga tgcttcaagc
120
tgtgcagtgc tgctcccagc atcactgttc gtcaatagtc acccaggaat agaccggcct
180
ggcatgctct gcagtttccg gatccctggt gcctggtcct gtgcctggtc cctgaatata
240
caagcaaata actgcttcag tacaggcttg tctcggcggg tcctgttgac caacgtgggtg
300
acgggacacc ggcagtcctt tgggaccaac agtgatgtct tggcccagca gtttgccttc
360
atggctcctc tgctgtttta tggctgccgc tctggggaaa tctttgccat tgatctgcgt
420
tgtggaaatc aaggcaaggg atggaaggcc acccgctgt ttcattgattc agcagtgacc
480
tctgtgcgga tcctccaaga tgagcaatac ctgatggctt cagacatggc tggaaagatc
540
aagctgtggg acctgaggac cacgaagtgc gtaaggcagt acgaaggcca cgtgaatgag
600
tacgcctacc tgcccctgca tgtgcacgag gaagaaggaa tcctgggtggc agtggggccag
660
gactgctaca cgagaatctg gagcctccac gatgcccgc tactgagaac cataccctcc
720
ccgtaccctg cctccaaggc cgacattccc agtgtggcct tctcgtcgcg gctggggggc
780
tcccggggcg cgccgggggt gctcatggct gtccggcagg acctttactg ttactcctac
840
agctaattct gcagggcaca gcccagagcc atgtggattt gacttacggg agtaaagcgt
900
aactttttac tgcattctaat gaggggtgtt taagtacac tcagtgtaca cagatcccat
960
cctctggctg ctaggagaga agtgctgaat gttccgtgtg gagatgctca ggaaagtatt
1020
ttgagttaaa ttgctggctg agagagcttg gaagtccttt tcataaaagg tacctctttc
1080
cttttcttat tgaattctta gaacttagtt aaccctccct gccttttctt aacaaaaagg
1140
acttttctaa ggactgaaga ttggcaaaaa cgaaaagctt cttcctccaa gagcccattg
1200
aagaagccca gtgatgagac ggtgagatgg tttgagtcct cggtgcttg gtagcaggaa
1260
gaaagacctg catcctgcat ctgtacttg ggaagccagc ggagaggacg gggaggttac
1320
ttctctaagt ttctgcagaa atattgaagg ctggagtttg gaatccttaa acttggcctt
1380
ctcaaactca gcagcagatc tccgggattc tgctgttatt atccaaaggc gttggaagga
1440
aagatggatc ttcttacatg ctagaagttt taaacgggcc ttaacatgcc tttgttcaag
1500
cacctccag aatgtaaggc tcagcagctc tggtttctat tacggtgact tgaatgtcag
1560

attcaagggc ccggcgtcaa aggaaattgg ttttgacttt ttgtaatcta ggagcgacag
 1620
 ttcgtgagat gtttattcag tgtaaagag cctgtttttc taccaaaca taaaaccaag
 1680
 agaagaaaaa aaaaaaaaaa aaaa
 1704

<210> 3732

<211> 281

<212> PRT

<213> Homo sapiens

<400> 3732

Tyr	Val	Leu	Arg	Asn	Leu	Tyr	Val	Pro	Asn	Arg	Lys	Val	Lys	Ser	Leu
1				5					10					15	
Cys	Trp	Ala	Ser	Leu	Asn	Gln	Leu	Asp	Ser	His	Val	Leu	Leu	Cys	Phe
			20					25					30		
Glu	Gly	Ile	Thr	Asp	Ala	Ser	Ser	Cys	Ala	Val	Leu	Leu	Pro	Ala	Ser
		35					40					45			
Leu	Phe	Val	Asn	Ser	His	Pro	Gly	Ile	Asp	Arg	Pro	Gly	Met	Leu	Cys
	50					55				60					
Ser	Phe	Arg	Ile	Pro	Gly	Ala	Trp	Ser	Cys	Ala	Trp	Ser	Leu	Asn	Ile
65					70					75					80
Gln	Ala	Asn	Asn	Cys	Phe	Ser	Thr	Gly	Leu	Ser	Arg	Arg	Val	Leu	Leu
			85						90					95	
Thr	Asn	Val	Val	Thr	Gly	His	Arg	Gln	Ser	Phe	Gly	Thr	Asn	Ser	Asp
			100					105					110		
Val	Leu	Ala	Gln	Gln	Phe	Ala	Leu	Met	Ala	Pro	Leu	Leu	Phe	Asn	Gly
		115					120					125			
Cys	Arg	Ser	Gly	Glu	Ile	Phe	Ala	Ile	Asp	Leu	Arg	Cys	Gly	Asn	Gln
	130					135					140				
Gly	Lys	Gly	Trp	Lys	Ala	Thr	Arg	Leu	Phe	His	Asp	Ser	Ala	Val	Thr
145					150					155					160
Ser	Val	Arg	Ile	Leu	Gln	Asp	Glu	Gln	Tyr	Leu	Met	Ala	Ser	Asp	Met
			165					170						175	
Ala	Gly	Lys	Ile	Lys	Leu	Trp	Asp	Leu	Arg	Thr	Thr	Lys	Cys	Val	Arg
			180					185					190		
Gln	Tyr	Glu	Gly	His	Val	Asn	Glu	Tyr	Ala	Tyr	Leu	Pro	Leu	His	Val
	195						200					205			
His	Glu	Glu	Glu	Gly	Ile	Leu	Val	Ala	Val	Gly	Gln	Asp	Cys	Tyr	Thr
	210					215					220				
Arg	Ile	Trp	Ser	Leu	His	Asp	Ala	Arg	Leu	Leu	Arg	Thr	Ile	Pro	Ser
225					230					235				240	
Pro	Tyr	Pro	Ala	Ser	Lys	Ala	Asp	Ile	Pro	Ser	Val	Ala	Phe	Ser	Ser
				245					250					255	
Arg	Leu	Gly	Gly	Ser	Arg	Gly	Ala	Pro	Gly	Leu	Leu	Met	Ala	Val	Gly
		260						265						270	
Gln	Asp	Leu	Tyr	Cys	Tyr	Ser	Tyr	Ser							
	275						280								

<210> 3733

<211> 515

<212> DNA

<213> Homo sapiens

<400> 3733

nngggccgag ctgtccgacg tgtcactgca gggacccgcc cgggggtgggt ctcgggctct
 60
 cgctaccgga gagggaggag aagggggagg ttaaagggga aggaccccg aagtgcctcc
 120
 tcctcagtgc gggagagggga gacgccgggg gcangtccat gcctcccgcg gcgtgggttg
 180
 tgcgtcccag gtgacgtcag aagcagcccc ccctgcctg gatggtgcgc cctgagtgac
 240
 gtcaggagca gagggccggag ctgtccatca gcaccaaagg ccgcggggcg gctcagggca
 300
 tggggccgcg gttctggggc ggcccagacc ccggctcctg cgccttcccc ttctcaggc
 360
 nccagcccga gttcccggac gccgcgggac tggagtgcc a gccggtgttg gacgtggagc
 420
 ggcgccgcca ccgcgccgac accattctct ccggcccagc agcccccttc ctgcacgac
 480
 ggactttccc tggaccccag tcagttggag cctct
 515

<210> 3734

<211> 171

<212> PRT

<213> Homo sapiens

<400> 3734

Xaa	Gly	Arg	Ala	Val	Arg	Arg	Val	Thr	Ala	Gly	Thr	Arg	Pro	Gly	Trp
1				5					10					15	
Val	Ser	Gly	Ser	Arg	Tyr	Arg	Arg	Gly	Arg	Arg	Arg	Gly	Arg	Leu	Lys
			20					25					30		
Gly	Lys	Asp	Pro	Gly	Ser	Ala	Pro	Ser	Ser	Val	Arg	Glu	Arg	Glu	Thr
		35					40				45				
Pro	Gly	Ala	Xaa	Pro	Cys	Leu	Pro	Arg	Arg	Gly	Trp	Cys	Val	Pro	Gly
	50					55				60					
Asp	Val	Arg	Ser	Ser	Pro	Pro	Leu	Pro	Gly	Trp	Cys	Ala	Leu	Ser	Asp
65					70				75					80	
Val	Arg	Ser	Arg	Gly	Arg	Ser	Cys	Pro	Ser	Ala	Pro	Lys	Ala	Ala	Gly
			85					90					95		
Gly	Leu	Arg	Ala	Trp	Gly	Arg	Gly	Ser	Gly	Ala	Ala	Arg	Ala	Pro	Ala
			100					105					110		
Pro	Ala	Pro	Ser	Pro	Ser	Ser	Gly	Xaa	Ser	Pro	Ser	Ser	Arg	Thr	Pro
		115					120					125			
Arg	Asp	Trp	Ser	Ala	Ser	Arg	Cys	Trp	Thr	Trp	Ser	Gly	Ala	Ala	Thr
	130					135					140				
Ala	Pro	Thr	Pro	Phe	Ser	Pro	Ala	Gln	Gln	Pro	Pro	Ser	Ser	His	Asp
145					150					155				160	
Gly	Leu	Ser	Leu	Asp	Pro	Ser	Gln	Leu	Glu	Pro					
			165					170							

<210> 3735

<211> 2512

<212> DNA

<213> Homo sapiens

<400> 3735

ngcaggttct tcggaaggct tgtagctcca aaatggatcg ccagagtgtt ctccatgtac
60
tgggcatatt gaaaaactcc aaattttctca aagtctgcct gcctgcttat gtggtaggga
120
tgatcactga acccatccct gacatccgaa accagtatcc agagcacata agcaacatca
180
tctccctect ccaggacctt gtaagtgtct tccctgccag ctctgtgcag gaaacttcca
240
tgctggtttc cctcctgcc aacctcttta atgctctgag agcctctggt gttgacatag
300
aagaggaaac ggagaagaac ctggaaaagg tacagactat cattgaacat ctgcaggaaa
360
agaggcgaga gggcactttg agagtggata cctacactct agtgcagcct gaggcagaag
420
accatgttga gagctaccga accatgcccc tttaccctac ctacaatgaa gtgcacttgg
480
atgagaggcc ctcccttcgc cccaatatca tttctggaaa atacgacagc actgctatct
540
atctggatac ccacttcgg ctccctgcgag aagatttcgt cagaccttta cggaaggta
600
ttttggaact tctccaaagc tttgaagacc agggcctgag gaagagaaag tttgatgaca
660
tccgaatcta ctttgacacc aggattatca ccccatgtg ttcacatca ggcatagtct
720
acaaggtgca gtttgacaca aaaccactga agtttgttcg ctggcagaat tccaaacgat
780
tgctctatgg gtctttggta tgcattgtcca aggacaactt cgagacattt ctttttgcca
840
ccgtatctaa cagggagcag gaagatctct gccgaggaat tgtccagctc tgcttcaatg
900
agcaaagcca acagctgcta gcagaggtcc agccctctga ctctttctct atggtagaga
960
caactgcata ctttgaggcc tacaggcacg tcctggaagg actccaggag gtccaggagg
1020
aagatgttcc cttccaggag aatatcgtgg agtgtaactc tcatgtgaag gagccaagggt
1080
acttgcta at ggggggcaga tatgacttta cccctta at agagaatcct tcagccactg
1140
gggaatttct aagaaatgtc gagggtttga gacatcccag aattaatgtc ttagatcctg
1200
gccagtggcc ctcaaaagaa gccctgaagc tggatgactc ccagatggaa gccttgcaatg
1260
ttgtctcac aagggaactg gctattatc aaggacctc tggaaacaggc aaaacctatg
1320
tgggtctaaa aattgttcag gccctcctaa ccaacgagtc tgtttgcaa attagcctcc
1380
agaagtccc catcttggtt gtgtgttata ctaatcatgc tttggaccag tttctggaag
1440
gcatctacaa ttgtcagaag accagcattg tgcgggtggg tggaggagc aacagtgaag
1500
tcctgaagca gttcaccta agggagctga ggaacaagc ggaattccgc cgcaacctcc
1560

ccatgcacct ccgaagggcc tacatgagta tcatgacaca gatgaaggag tcagagcaag
 1620
 agcttcatga aggagccaag accctggagt gcaccatgcg tgggtgccta cggaacagt
 1680
 acctgcagaa gtacatctca cccagcact gggaaagtct catgaatgga ccagtgcagg
 1740
 atagtgaatg gatttgcttc cagcactgga agcattccat gatgctggag tggctaggtc
 1800
 ttggtgctcg ttctttcacg caaagtgttt ctccagcagg acctgagaat acagcccagg
 1860
 cagaagggga tgaggaggaa gaaggggagg aggagagttc gctgatagag atcgagagg
 1920
 aagctgacct gattcaagca gaccgggtga ttgaggagga agaggtggtg aggccccagg
 1980
 ggcggaagaa ggaagagagt ggagcagacc aggagttggc taaaatgctt ctggccatga
 2040
 ggctagacca ttgtggcact gggacagcag ctggacagga gcaagccaca ggagagtggc
 2100
 agaccagcg caaccagaa aaagaaaatg aaaaaaagag tgaaggatga gcttcgcaaa
 2160
 ctgaacacca tgcctgcagc cgaggccaac gagatcgagg atgtttggca cctggacctc
 2220
 agttctcgct ggcagcttta taggctctgg ctacagttgt accaggtga cccccgcc
 2280
 gggaagatcc tcagctatga acgccagtac cgcacatcag cagaaagaat ggccgagctg
 2340
 agactccagg aagacctgca cattcttaaa gatgcccagg ttgtaggaat gacaaccaca
 2400
 ggtgctgcc aataccgcc gatcctacag aaggtggagc cgaggattgt catagtggaa
 2460
 gaagctgcgg aagtccttga ggccataacc attgccacat tgagcaaagc tt
 2512

<210> 3736

<211> 155

<212> PRT

<213> Homo sapiens

<400> 3736

Thr	Ile	Val	Ala	Leu	Gly	Gln	Gln	Leu	Asp	Arg	Ser	Lys	Pro	Gln	Glu
1				5				10						15	
Ser	Gly	Arg	Pro	Ser	Ala	Thr	Gln	Lys	Lys	Lys	Met	Lys	Lys	Arg	Val
			20					25					30		
Lys	Asp	Glu	Leu	Arg	Lys	Leu	Asn	Thr	Met	Pro	Ala	Ala	Glu	Ala	Asn
		35				40						45			
Glu	Ile	Glu	Asp	Val	Trp	His	Leu	Asp	Leu	Ser	Ser	Arg	Trp	Gln	Leu
	50					55				60					
Tyr	Arg	Leu	Trp	Leu	Gln	Leu	Tyr	Gln	Ala	Asp	Thr	Pro	Pro	Gly	Lys
65					70					75				80	
Ile	Leu	Ser	Tyr	Glu	Arg	Gln	Tyr	Arg	Thr	Ser	Ala	Glu	Arg	Met	Ala
				85				90					95		
Glu	Leu	Arg	Leu	Gln	Glu	Asp	Leu	His	Ile	Leu	Lys	Asp	Ala	Gln	Val
			100					105				110			
Val	Gly	Met	Thr	Thr	Thr	Gly	Ala	Ala	Lys	Tyr	Arg	Gln	Ile	Leu	Gln

	115		120		125										
Lys	Val	Glu	Pro	Arg	Ile	Val	Ile	Val	Glu	Glu	Ala	Ala	Glu	Val	Leu
	130					135					140				
Glu	Ala	His	Thr	Ile	Ala	Thr	Leu	Ser	Lys	Ala					
145					150					155					

<210> 3737

<211> 1046

<212> DNA

<213> Homo sapiens

<400> 3737

```

ngtgctgtgg ctgcaggctg gcagggtggca gccccatgcc cagggtgcctg cgtatgctac
60
aatgagccca aggtgacgac aagctgcccc cagcagggcc tgcaggctgt gcccgtgggc
120
atccctgctg ccagccagcg catcttctctg cacggcaacc gcatctcgca tgtgccagct
180
gccagcttcc gtgctgccc caacctcacc atcctgtggc tgcactcgaa tgtgctggcc
240
cgaattgatg cggctgcctt cactggcctg gccctcctgg gagcactgga cctcagcgat
300
aatgcacagc tccggtctgt ggacctgcc acattccacg gcctggggccg cctacacacg
360
ctgcacctgg accgctgcgg cctgcaggag ctggggcccg ggctgttccg cggcctggct
420
gccctgcagt acctctacct gcaggacaac gcgctgcagg cactgcctga tgacaccttc
480
cgcgacctgg gcaacctcac acacctcttc ctgcacggca accgcatctc cagcgtgccc
540
gagcgcgcct tccgtgggct gcacagcctc gaccgtctcc tactgcacca gaaccgcgtg
600
gccccatgtg acccgcatgc ctccctgac ctgggccgcc tcatgacact ctatctgttt
660
gccaacaatc tatcagcgct gccactgag gccctggccc cctgcgtgc cctgcagtac
720
ctgaggctca acgacaaccc ctgggtgtgt gactgccggg cacgcccact ctgggcctgg
780
ctgcagaagt tccgoggctc ctccctcgag gtgccctgca gcctcccga acgcctggct
840
ggccgtgacc tcaaacgcct agctgccaat gacctgcagg gctgcgctgt ggccaccggc
900
ccttaccatc ccatctggac cggcagggcc accgatgagg agccgctggg gcttcccaag
960
tgctgccagc cagatgccgc tgacaaggcc tcagtactgg agcctggaag accagcttcg
1020
gcaggcaatg cgctgaaggg acgcgt
1046

```

<210> 3738

<211> 348

<212> PRT

<213> Homo sapiens

<400> 3738

```

Xaa Ala Val Ala Ala Gly Trp Gln Val Ala Ala Pro Cys Pro Gly Ala
 1           5           10           15
Cys Val Cys Tyr Asn Glu Pro Lys Val Thr Thr Ser Cys Pro Gln Gln
          20           25           30
Gly Leu Gln Ala Val Pro Val Gly Ile Pro Ala Ala Ser Gln Arg Ile
          35           40           45
Phe Leu His Gly Asn Arg Ile Ser His Val Pro Ala Ala Ser Phe Arg
          50           55           60
Ala Cys Arg Asn Leu Thr Ile Leu Trp Leu His Ser Asn Val Leu Ala
65           70           75           80
Arg Ile Asp Ala Ala Ala Phe Thr Gly Leu Ala Leu Leu Gly Ala Leu
          85           90           95
Asp Leu Ser Asp Asn Ala Gln Leu Arg Ser Val Asp Pro Ala Thr Phe
          100          105          110
His Gly Leu Gly Arg Leu His Thr Leu His Leu Asp Arg Cys Gly Leu
          115          120          125
Gln Glu Leu Gly Pro Gly Leu Phe Arg Gly Leu Ala Ala Leu Gln Tyr
          130          135          140
Leu Tyr Leu Gln Asp Asn Ala Leu Gln Ala Leu Pro Asp Asp Thr Phe
145          150          155          160
Arg Asp Leu Gly Asn Leu Thr His Leu Phe Leu His Gly Asn Arg Ile
          165          170          175
Ser Ser Val Pro Glu Arg Ala Phe Arg Gly Leu His Ser Leu Asp Arg
          180          185          190
Leu Leu Leu His Gln Asn Arg Val Ala His Val His Pro His Ala Phe
          195          200          205
Arg Asp Leu Gly Arg Leu Met Thr Leu Tyr Leu Phe Ala Asn Asn Leu
          210          215          220
Ser Ala Leu Pro Thr Glu Ala Leu Ala Pro Leu Arg Ala Leu Gln Tyr
225          230          235          240
Leu Arg Leu Asn Asp Asn Pro Trp Val Cys Asp Cys Arg Ala Arg Pro
          245          250          255
Leu Trp Ala Trp Leu Gln Lys Phe Arg Gly Ser Ser Ser Glu Val Pro
          260          265          270
Cys Ser Leu Pro Gln Arg Leu Ala Gly Arg Asp Leu Lys Arg Leu Ala
          275          280          285
Ala Asn Asp Leu Gln Gly Cys Ala Val Ala Thr Gly Pro Tyr His Pro
          290          295          300
Ile Trp Thr Gly Arg Ala Thr Asp Glu Glu Pro Leu Gly Leu Pro Lys
305          310          315          320
Cys Cys Gln Pro Asp Ala Ala Asp Lys Ala Ser Val Leu Glu Pro Gly
          325          330          335
Arg Pro Ala Ser Ala Gly Asn Ala Leu Lys Gly Arg
          340          345

```

<210> 3739

<211> 1252

<212> DNA

<213> Homo sapiens

<400> 3739

```

tcataccttat cttcgtcatt ttctgggctg agcttttttg acaaggtgct gtgccagtct
60

```

acacccctca gccagctggt cttggaggtc ctgccctgg gacttgccg gctcatccag
 120
 agtgaggagg gcctggagat gtcattcaa tgagcgggag gcacctctcc cttcccgtaa
 180
 cttctccctt aactgggtca gctctcggtc ctgagagtga accaggactt tatattgctg
 240
 tattttcttct gtcggttggc caggaagccg gccagttgag ttagaaaaca tctctctttg
 300
 aggtttctga actgctgttt gttctctgcc aactgggggc gcaatttctc gttgatttct
 360
 agaatgttca tctctgcctt ctgctggac aaagggccgg ctgataccac catgctgacg
 420
 tttgtggcag aagaggtgga gtcagggact tactgttggtg aaaaatgtga tcactcccca
 480
 cagcacttta ggatccttca ccacaaaaac aagggttcgag gtgcctcaac tcagagctga
 540
 aagcactgcc agtagctcag actctgataa gagtgaggta gattgtggcc agcgtgccag
 600
 gtaaccgtct tgatccatag gtcacattt gatcccaact ggcggctgct tcttggcatt
 660
 aactttggat tcccaaccag taaatcttag caagatctga gtttctccag gtatgatatt
 720
 attttgtttg accatcctta tcttcaaggg ctggttgatc tggcagctct tgatgtcagc
 780
 ccacaccatg tgaggctgct cttggtgcac cgaatgggga agtttctaca tcagggcctc
 840
 ggagaatcca ctggaagccc tggacagtgg gagtcagcgg cacccccagt gtggaggcca
 900
 agagcacaca gactgaagc tccaggacac cctcaggagg acggcaaggg acaattggct
 960
 ggtgagagcc cgggtcaccc ggaaccttcg cctgggtcta aacaggattt gccttcagat
 1020
 tgctcagaa acgctgggtg gacttcgctg aacttcccat tcacagggca gccggcagcc
 1080
 gcgcgcgcgc gcctcggccc agctcctggc gccgcagatc gcccgctccg cgttcccaaa
 1140
 agccccgcgc tcgctcagaa gctcgggcag cctcgcgacc ctcacctacc cctcccaata
 1200
 tcgccgctgt ctcaaccgcc gccagccca tagcctgcgg ccagctggat cc
 1252

<210> 3740

<211> 139

<212> PRT

<213> Homo sapiens

<400> 3740

Met	Gly	Lys	Phe	Leu	His	Gln	Gly	Leu	Gly	Glu	Ser	Thr	Gly	Ser	Pro
1				5				10					15		
Gly	Gln	Trp	Glu	Ser	Ala	Ala	Pro	Pro	Val	Trp	Arg	Pro	Arg	Ala	His
		20					25					30			
Ser	Thr	Glu	Ala	Pro	Gly	His	Pro	Gln	Glu	Asp	Gly	Lys	Gly	Gln	Leu
	35					40					45				
Ala	Gly	Glu	Ser	Pro	Gly	His	Arg	Glu	Pro	Ser	Pro	Gly	Ser	Lys	Gln

```

      50              55              60
Asp Leu Pro Ser Asp Cys Leu Arg Asn Ala Gly Trp Thr Ser Arg Asn
65              70              75              80
Phe Pro Phe Thr Gly Gln Pro Ala Ala Ala Pro Pro Arg Leu Gly Pro
      85              90              95
Ala Pro Gly Ala Ala Asp Arg Pro Ser Arg Val Pro Lys Ser Pro Ala
      100              105              110
Leu Ala Gln Lys Leu Gly Gln Pro Arg Asp Pro His Leu Pro Leu Pro
      115              120              125
Ile Ser Pro Leu Ser Gln Pro Pro Ser Pro
      130              135

```

<210> 3741

<211> 562

<212> DNA

<213> Homo sapiens

<400> 3741

```

cagacagcaa gcgacggccc agctcctcaa ggccacctcc gacctcggcg ggggtggggca
60
gtcgtgtcca ctgtggggat ccacgtcctg actaaccttg tgttcctaga aatccctcac
120
cggcagatcg gtgcctcctg aatcccaccc aaaattccca ctgggaatgt gttcctgaaa
180
gagctgcccc ggcttgagaa agcctctttt cagaccaaac ttcgtattca aagctcaaaa
240
agaactgcac acaattagga cagtcataca agatgctgcc cctaattctg ccacaatctg
300
cgagaaggga ggcggggctt ccgagggcaa agtgcccctg ggaagggatc cgcagggaa
360
agctttgaaa ggaccacagc cccagccac gaggggagca agcacgagcc ggggagagag
420
ctctgcgctc gcacacggga ttcattctcg ccgcctctgc ccgtttccag caacacggag
480
ccaggcgga acagtttctc cagccattc gcctccccga ctcttctct cagggcacgg
540
ctgggctgct ttcattcacg gt
562

```

<210> 3742

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3742

```

Met Gly Trp Arg Asn Cys Phe Arg Leu Ala Pro Cys Cys Trp Lys Arg
1              5              10              15
Ala Glu Ala Ala Glu Met Asn Pro Val Cys Glu Arg Arg Ala Leu Ser
      20              25              30
Pro Ala Arg Ala Cys Ser Pro Arg Gly Trp Gly Leu Trp Ser Phe Gln
      35              40              45
Ser Cys Ser Leu Arg Ile Pro Ser Gln Gly His Phe Ala Leu Gly Ser
      50              55              60
Pro Ala Ser Leu Leu Ala Asp Cys Gly Arg Ile Arg Gly Ser Ile Leu

```



```

65          70          75          80
Tyr Asp Cys Pro Asn Cys Val Gln Phe Phe Leu Ser Phe Glu Tyr Glu
          85          90          95
Val Trp Ser Glu Lys Arg Leu Ser Gln Ala Trp Ala Ala Leu Ser Gly
          100          105          110
Thr His Ser Gln Trp Glu Phe Trp Val Gly Phe Arg Arg His Arg Ser
          115          120          125
Ala Gly Glu Gly Phe Leu Gly Thr Gln Gly
          130          135

```

<210> 3743

<211> 468

<212> DNA

<213> Homo sapiens

<400> 3743

```

nntcatgagc cttcttaciaa gctccatttt ggcaaggcgc tgacaatggc ggaggctgaa
60
ggcaatgcaa gctgcacagt cagtctaggg ggtgccaata tggcagagac ccacaaagcc
120
atgatcctgc aactcaatcc cagtgagaac tgcacctgga caatagaaag accagaaaac
180
aaaagcatca gaattatctt ttcctatgtc cagcttgatc cagatggaag ctgtgaaagt
240
gaaaacatta aagtctttga cggaacctcc agcaatgggc ctctgctagg gcaagtctgc
300
agtaaaaacg actatgttcc tgtatttgaa tcatcatcca gtacattgac gtttcaaata
360
gttactgact cagcaagaat tcaaagaact gtctttgtgt tctagtagtt cttatttcct
420
aacatcttta ttccaaagtg tggcggttac ctggatccct ggaaggat
468

```

<210> 3744

<211> 134

<212> PRT

<213> Homo sapiens

<400> 3744

```

Xaa His Glu Pro Ser Tyr Lys Leu His Phe Gly Lys Ala Leu Thr Met
1          5          10          15
Ala Glu Ala Glu Gly Asn Ala Ser Cys Thr Val Ser Leu Gly Gly Ala
20          25          30
Asn Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser
35          40          45
Glu Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg
50          55          60
Ile Ile Phe Ser Tyr Val Gln Leu Asp Pro Asp Gly Ser Cys Glu Ser
65          70          75          80
Glu Asn Ile Lys Val Phe Asp Gly Thr Ser Ser Asn Gly Pro Leu Leu
85          90          95
Gly Gln Val Cys Ser Lys Asn Asp Tyr Val Pro Val Phe Glu Ser Ser
100          105          110
Ser Ser Thr Leu Thr Phe Gln Ile Val Thr Asp Ser Ala Arg Ile Gln

```

115
Arg Thr Val Phe Val Phe
130

120

125

<210> 3745
<211> 345
<212> DNA
<213> Homo sapiens

<400> 3745
acgcgtcgaa aggggaagagc agaggacgct ggctctcatg gcaggatggg gtgtgtacgg
60
gacgctgtgg gagaggaaaa cagccacatg tgggctggct gcttggagga gacacatgag
120
ccgtgaacac gtctcccccg gccgctccct ggttccatgc gtgctcgtct tgggcaccac
180
gagaacacag ccatgcagcc cccgatcctg cagccacagc cacggcatcg cctggtcgga
240
tgcagcatct gctccggacg cctctcgtg tgggtgccag gcctgccagg ccaagccccg
300
attctcaggg gcggcaggag gtgggaggca cgtttgggcg gatcc
345

<210> 3746
<211> 102
<212> PRT
<213> Homo sapiens

<400> 3746
Met Ala Gly Trp Cys Val Tyr Gly Thr Leu Trp Glu Arg Lys Thr Ala
1 5 10 15
Thr Cys Gly Leu Ala Ala Trp Arg Arg His Met Ser Arg Glu His Val
20 25 30
Ser Pro Gly Arg Ser Leu Val Pro Cys Val Leu Val Leu Gly Thr Thr
35 40 45
Arg Thr Gln Pro Cys Ser Pro Arg Ser Cys Ser His Ser His Gly Ile
50 55 60
Ala Trp Ser Asp Ala Ala Ser Ala Pro Asp Ala Ser Arg Cys Arg Cys
65 70 75 80
Gln Ala Cys Gln Ala Lys Pro Arg Phe Ser Gly Ala Ala Gly Gly Gly
85 90 95
Arg His Val Trp Ala Asp
100

<210> 3747
<211> 800
<212> DNA
<213> Homo sapiens

<400> 3747
cctaggcgag gcgctggcgc tggggctctgg ctggcgtcat gcgtgccacg ctctcctcta
60
cgcgccggac cctgggatgc tcttcggccg catcccgctg cgctacgcca tactggtgag
120

aagggggcgc gcccgccac tttctgctg agccccgcac cctctctggt ggtctctct
 180
 ggggcgcccc tgccaatccc cgtttccccc tcccgcagat gcagatgcgc ttcgatggac
 240
 gcctgggctt ccccgcgga ttcgtggaca cgcaggacag aagcctagag gacgggctga
 300
 accgcgagct gcgcgaggag ctgggcgaag cggtgcgcg tttccgcgtg gagcgactg
 360
 actaccgcag ctcccacgtc ggggtcaggg ccacgcgttg tggccactt ctatgccaag
 420
 cgtctgacgc tcgaggagct gttggctgtg gaggcggcg caacacgcgc caaggaccac
 480
 gggctggagg tgggaccagc ctgggactct gtccctttcc caatttctc ttctccaaa
 540
 gctttctctc cccaagaaa gcatccctgg agaaaagtct ttgccctct gaccttgccc
 600
 tctccccagc tttcttggtg gagttgggat cgtgatcacc tatactctga attagtactg
 660
 ccaacctggg ctttctgtaa aggtctttcc caccctttac caggagagat ctttctaga
 720
 acacactcat ccatgtctct ctgctgttcc ctattgacag tgtgatagat taccacatta
 780
 tctaggtgtg gcaacctagg
 800

<210> 3748

<211> 138

<212> PRT

<213> Homo sapiens

<400> 3748

Met	Gln	Met	Arg	Phe	Asp	Gly	Arg	Leu	Gly	Phe	Pro	Gly	Gly	Phe	Val
1				5					10					15	
Asp	Thr	Gln	Asp	Arg	Ser	Leu	Glu	Asp	Gly	Leu	Asn	Arg	Glu	Leu	Arg
			20					25					30		
Glu	Glu	Leu	Gly	Glu	Ala	Ala	Ala	Ala	Phe	Arg	Val	Glu	Arg	Thr	Asp
		35				40						45			
Tyr	Arg	Ser	Ser	His	Val	Gly	Val	Arg	Ala	Thr	Arg	Cys	Gly	Pro	Leu
	50				55				60						
Leu	Cys	Gln	Ala	Ser	Asp	Ala	Arg	Gly	Ala	Val	Gly	Cys	Gly	Gly	Arg
65				70				75						80	
Arg	Asn	Thr	Arg	Gln	Gly	Pro	Arg	Ala	Gly	Gly	Gly	Thr	Ser	Leu	Gly
			85			90							95		
Leu	Cys	Pro	Phe	Pro	Asn	Phe	Leu	Phe	Ser	Gln	Ser	Phe	Leu	Ser	Pro
		100				105						110			
Lys	Lys	Ala	Ser	Leu	Glu	Lys	Ser	Leu	Cys	Pro	Ser	Asp	Leu	Ala	Leu
	115				120							125			
Ser	Pro	Ala	Phe	Leu	Val	Glu	Leu	Gly	Ser						
	130				135										

<210> 3749

<211> 648

<212> DNA

<213> Homo sapiens

<400> 3749

cgcgccccct gggaggatcc tgccaagtgg gtgatggaca catatccatg ggcagccagc
 60
 ccacaacagc acgagtggcc tcccctgctg cagttacggc ctgaggatgt cggcttcgac
 120
 ggctactcca tgccctggga gggatcgaca agcaagcaga tgccccccag tgatgctgaa
 180
 ggtgacccgc tgatgaacat gctgatgagg ctgcaggagg cagccaacta ctccagcccc
 240
 cagagctatg acagcgactc caacagcaac agccatcacg atgacatctt ggactcctct
 300
 ttggagtcca ctctgtgaca gggggccgga gccagcgcc ctctcttctt cctcaccgca
 360
 ttccacctgc atccccaca tcacctgaa gatgacttcc tgagccagcc cccagccaca
 420
 gccttagagc tgcgggaaca ccgagacccc ccgtccttca gcctcgacct ggggtgcaggc
 480
 atcccgggccc agctgcctgc ggaccgcttc cttccacagc gagaactgca ctaccttctg
 540
 ttgtacttta attattgttt tgccttgttg ctgtgacctc cctaagacac tgaagatact
 600
 tctcgggaaa ggatcatcgc cgttgaaatg aaaaaaaaaa aaaaaaaaaa
 648

<210> 3750

<211> 105

<212> PRT

<213> Homo sapiens

<400> 3750

Arg	Ala	Pro	Trp	Glu	Asp	Pro	Ala	Lys	Trp	Val	Met	Asp	Thr	Tyr	Pro
1				5					10					15	
Trp	Ala	Ala	Ser	Pro	Gln	Gln	His	Glu	Trp	Pro	Pro	Leu	Leu	Gln	Leu
			20					25					30		
Arg	Pro	Glu	Asp	Val	Gly	Phe	Asp	Gly	Tyr	Ser	Met	Pro	Arg	Glu	Gly
		35					40					45			
Ser	Thr	Ser	Lys	Gln	Met	Pro	Pro	Ser	Asp	Ala	Glu	Gly	Asp	Pro	Leu
	50					55					60				
Met	Asn	Met	Leu	Met	Arg	Leu	Gln	Glu	Ala	Ala	Asn	Tyr	Ser	Ser	Pro
65					70				75					80	
Gln	Ser	Tyr	Asp	Ser	Asp	Ser	Asn	Ser	Asn	Ser	His	His	Asp	Asp	Ile
			85					90						95	
Leu	Asp	Ser	Ser	Leu	Glu	Ser	Thr	Leu							
			100					105							

<210> 3751

<211> 554

<212> DNA

<213> Homo sapiens

<400> 3751

gcgcgcctgt ctgcctcgc acgtgcgctg gcagggccgc cgctcgcgcc tcaccatgga
 60

cctggccccg ctgctgctcg cggctcggtc gccccgagcg gggccaaggg cgtttcctac
 120
 acgcagggcc agagtccgga gccgcggacc cgcgaggtat ttctactacg tggaccacca
 180
 gggccagctt ttcttgatg attccaaaat gaagaatttc atcacctgct tcaaagaccc
 240
 gcagtctctg gtcaccttct tctccgcct gagacccaac cgcagcgggc gctacgaggc
 300
 cgctttcccc ttctctcgc cctgcggcag agagcgcaac ttctgctgct gcgaggaccg
 360
 gccggtggtc ttcacgcacc tgctgaccgc ggaccacggg cctccgcgcc tctcctactg
 420
 cggcggtggc gaggccctgg ccgtgccctt cgagccggcg cgctgctgc ccctggcgcg
 480
 caacgggcgc ctgtaccacc cggcgccgga gcgtgcgggc ggcgtggggc tgggtgcgcc
 540
 ttcgcccctg gccc
 554

<210> 3752

<211> 66

<212> PRT

<213> Homo sapiens

<400> 3752

Ala	Arg	Leu	Ser	Ala	Leu	Ala	Arg	Ala	Leu	Ala	Gly	Pro	Pro	Pro	Arg
1				5					10					15	
Pro	His	His	Gly	Pro	Gly	Pro	Ala	Ala	Ala	Arg	Gly	Ser	Val	Ala	Pro
			20					25					30		
Ser	Gly	Ala	Lys	Gly	Val	Ser	Tyr	Thr	Gln	Gly	Gln	Ser	Pro	Glu	Pro
		35					40					45			
Arg	Thr	Arg	Glu	Val	Phe	Leu	Leu	Arg	Gly	Pro	Pro	Gly	Pro	Ala	Phe
	50					55					60				
Pro	Gly														
65															

<210> 3753

<211> 1426

<212> DNA

<213> Homo sapiens

<400> 3753

nnaattcgga acaggtgcag tacttgctct aactttgccg cagctgcctc ctttctctcg
 60
 gaaccactc tcctaaccac cccccgagag gcggagagaa tgtgggagca cttcagagag
 120
 gcctaggtc cggagatcgg gccatctggg ctctgaaagc aaattagttt tccaactcat
 180
 gtctggctcc ggcgttacc agacgcctgg aaggtecttc ctgcagtctg atcaccattt
 240
 ttctgctgc actgaccaat cagctcccct tggccttcaa cctcggaat gatggattag
 300
 gggagtctag aaatggacga agccctagaa acgcagctga agacgagcag aggacgcttc
 360

tcggctacag aatccctccc caccttgagg ctcttatctc aggtggacat ggactgcagg
 420
 gtccacatgc gacccatcgg cctgacgtgg gtgctgcaac tgaccttggc atggatcctg
 480
 ctagaagcct gtggagggag ccgcccactc caagccaggt cccagcaaca ccatgggctg
 540
 gcagctgata tgggcaaagg caagctgcac ctggcaggac cttgttgtcc ctgagagatg
 600
 gacacaacag agacatcggg ccctggaaac catccagaac gctgtggagt gccgagccct
 660
 gaatgcgaat ccttcctgga acacctccaa cgtgcccttc gcagtcgctt ccgcctgcgg
 720
 ctattggggg tacgccaggc acagccgctc tgcgaggagc tctgccaggc ctgggttcgcc
 780
 aactgcgaag atgatatac ctgcggcccc acttggtctc cactctcaga aaaaaggggc
 840
 tgtgagccca gctgccttac ctatggacag accttcgcag acgggacgga cctttgtcgc
 900
 tcggctctgg gccacgcctt accggtggct gctcctggag cccgtcactg cttcaacatc
 960
 tccatctccg cggtagctcg tcccagacca ggacgacggg gccgggaagc tccctcccg
 1020
 cgttcccga gccctgcac ctccatcctg gacgctgcgg gcagcgggag tggcagtgga
 1080
 agcggcagcg gccctagcg gacgcgtggc cctgagttgg gggagcgacc cttccccag
 1140
 cccgccccct caggacaccc agaaccacac ccctcgtcct ctgggccttc tgtaatagtt
 1200
 ttgagatgtc tgtccctcct ccctggagct ccagagaccc acccctctcc aggttatccc
 1260
 agaaatgacc caactctctc acttttccct ctccccttg aataaagtcg ccagctaaaa
 1320
 aaaaagtcca tgtccacctg agataagagc tgttggctgg attggggggt ccacatgcga
 1380
 cccatcggcc tgacgtgggt gctgcaactg acctcggcac ggatcc
 1426

<210> 3754

<211> 261

<212> PRT

<213> Homo sapiens

<400> 3754

Met	Asp	Glu	Ala	Leu	Glu	Thr	Gln	Leu	Lys	Thr	Ser	Arg	Gly	Arg	Phe
1				5				10					15		
Ser	Ala	Thr	Glu	Ser	Leu	Pro	Thr	Leu	Glu	Leu	Leu	Ser	Gln	Val	Asp
			20					25					30		
Met	Asp	Cys	Arg	Val	His	Met	Arg	Pro	Ile	Gly	Leu	Thr	Trp	Val	Leu
		35					40					45			
Gln	Leu	Thr	Leu	Ala	Trp	Ile	Leu	Leu	Glu	Ala	Cys	Gly	Gly	Ser	Arg
	50					55					60				
Pro	Leu	Gln	Ala	Arg	Ser	Gln	Gln	His	His	Gly	Leu	Ala	Ala	Asp	Leu
65					70					75				80	
Gly	Lys	Gly	Lys	Leu	His	Leu	Ala	Gly	Pro	Cys	Cys	Pro	Ser	Glu	Met

85								90				95			
Asp	Thr	Thr	Glu	Thr	Ser	Gly	Pro	Gly	Asn	His	Pro	Glu	Arg	Cys	Gly
100								105				110			
Val	Pro	Ser	Pro	Glu	Cys	Glu	Ser	Phe	Leu	Glu	His	Leu	Gln	Arg	Ala
115								120				125			
Leu	Arg	Ser	Arg	Phe	Arg	Leu	Arg	Leu	Leu	Gly	Val	Arg	Gln	Ala	Gln
130								135				140			
Pro	Leu	Cys	Glu	Glu	Leu	Cys	Gln	Ala	Trp	Phe	Ala	Asn	Cys	Glu	Asp
145								150				155			
Asp	Ile	Thr	Cys	Gly	Pro	Thr	Trp	Leu	Pro	Leu	Ser	Glu	Lys	Arg	Gly
165								170				175			
Cys	Glu	Pro	Ser	Cys	Leu	Thr	Tyr	Gly	Gln	Thr	Phe	Ala	Asp	Gly	Thr
180								185				190			
Asp	Leu	Cys	Arg	Ser	Ala	Leu	Gly	His	Ala	Leu	Pro	Val	Ala	Ala	Pro
195								200				205			
Gly	Ala	Arg	His	Cys	Phe	Asn	Ile	Ser	Ile	Ser	Ala	Val	Pro	Arg	Pro
210								215				220			
Arg	Pro	Gly	Arg	Arg	Gly	Arg	Glu	Ala	Pro	Ser	Arg	Arg	Ser	Arg	Ser
225								230				235			
Pro	Arg	Thr	Ser	Ile	Leu	Asp	Ala	Ala	Gly	Ser	Gly	Ser	Gly	Ser	Gly
245								250				255			
Ser	Gly	Ser	Gly	Pro											
260															

<210> 3755

<211> 3149

<212> DNA

<213> Homo sapiens

<400> 3755

```

atgaatctct gttccaaatg ctttgctgat tttcaaaaga aacagccaga cgatgattcc
60
gctccaagta caagtaacag ccaatcagat ttgttttccg aagagaccac cagtgacaac
120
aacaatacct cgataaccac gccaaactctt agtcccagcc agcagccgct tccgacagaa
180
ctgaatgtaa cttcaccgag taaagaggag tgtgggccat gcacagacac agctcatgtc
240
tcattaatca caccaacaaa aagatcctgt ggtacagatt cacagtctga gaatgaggct
300
tcaccagtaa aacggccacg actacttgag aatacggaac ggtccgagga aaccagtcga
360
tctaaacaga agagtcgacg tcggtgcttc cagtgccaaa ccaaactgga gctgggtgcag
420
caggaattgg gatcgtgtcg ctgcggttat gtgttctgta tgttacatcg cctccccgag
480
cagcacgact gcacattcga ccacatgggc cgtggccggg aggaagccat catgaaaatg
540
gtgaagctgg accggaaagt ggggcgctcc tgccagcgca tcggggaggg gtgctcctga
600
aggccaggca tggccaccac gtgacgctgt tcttagttca ctaatgttag ccttatttag
660
gacaaagtca gccagacacc ttgtactggg cagcgcgcag actgcagcca gtccgtttcc
720

```

tttcttttagc cagccatcct ggtactgtag tttagggggt gatgggtggt gaaattgatt
780
tctggctggt tactaagggt cctgctagcc attgtataaa attaaaacat gaagaatatt
840
ttttttttga gcatggctag tggattttaa acaacacata cctgtcactg ctggagtcaa
900
acttataaaa agccttaagt ggaaagtgtt ccagacggag actctgagtt aatagaggag
960
tagaagctgg tgttaaagtt cccacgacgc acatggcttt gccagaaact ctgtttaatg
1020
atcggccttt cacctcttca cttatcctta gtcccagtag ccaggatacc tgatggccac
1080
gtgtgccttg gccacgggag gctgctgaga ttggccacgt ggctgggctg ggtgggtggc
1140
tcactctccc acagagctgg aaatgggggg tgggggacag attcttacgg aaattttttt
1200
acctgacttg ctatgaaaaa actcatcaca caagaagaga aacagtaacc tcactttgaa
1260
aattagctcc actcaagact agtccacgaa cgagaccgc cttttctaca caggatccaa
1320
ggtcacgaga agcagccaga gtgccccgcc tccgccggct ctggtctgcc attcgccagt
1380
gcagggatct ggcacggacc agatgtggcg aatggcagca cagcgcggtg gctgggtctg
1440
cacactggcc tctgcagcca gatttctata ttgggagttt tttaaaaaga catttcatag
1500
ccaacaagaa tcagtagaag tgctgggagc agcagctggg gaagctgccg cccacgggct
1560
ctgccccctc cagctggagc cgcccgctgc tccaggggcc aagaggatga tgcgtggcc
1620
tccattctcg tttctatgca gccccatagt ccaaggacac ccagtccaca tctaccatat
1680
agcaagtta gtaagggag gcagcatagc tcccaggac agtgggtttg gatctgtcta
1740
gaacagcggg ttgtggctgt ggcccagctc cgagagtgat atttgcctg gtaggtgagg
1800
gcctgagggg acatttctcc acctgtgcc cctcatgttc acagaggatt tcagcagctg
1860
caactgcga cgccagggtg ggaaggggtg ggggtggcct ggttgcccca tgtaggaaa
1920
tcactaccag tcaggtgggg ctggggctgg gtggacagga tcaggattcc cttgaaagcc
1980
caggcagggg gagcagctcc agtggctcta gtgccgcac agatccagg ggtgagggc
2040
aggaggcccc tgcggaggca gcgtggatct gccacacat aggctactgg aatagtttaa
2100
cccagcaact ttccttttta taaaacaaca aatggttcaa ctctgtctgc aaattaacag
2160
ctgaacacct gcaactgaa atgttttttg atccgacgta ctgaaatagg aagtcatgct
2220
cttcccacc tccaccacc agagtggaa cgcgtgcaa atccccagcc ttaattcttg
2280
cttcaggacc cagaccggtg tcttgcctta gggcaacca gggcagaggg gccaggctg
2340

cccagcggtt accactgctg tcaagccaca gcccttggcc accatacggg ccatacctcag
 2400
 tgaggcagcc ccccataggc ttccgccaag ctctgggtccc gaagaggctg tgcgagccct
 2460
 tccccgccct ccccagggcc ccccgccccc tcctctgcct gctgcgtgga ggcagccatg
 2520
 ggaaggagcc caggggagct ggcctggggg agcgaagccc atgttcgctt cctgacttag
 2580
 agctgggggg ggtggggggg ggggcttggt cccctgcagt atctgttctg tgaagtttgt
 2640
 taaatgtaag gaaagcttaa attcttgtat ctttaaaaga gaaaatctta ttttaaccctt
 2700
 ttgtgttcta gatttactta cacacatagc ctagagctca gttttagttt taacattgtg
 2760
 aaaaatattaa aagaatcttg taactttatt cttttttctc ctgctgaaaa aaaaaattaa
 2820
 accaatcgta tgaaagtttg gttttcttgt ttcacccctt ctccctaagt cccctgggt
 2880
 tgctgggaaa actgacccat ctccctggcc agggctggaa agagatgggg gcctgtgtgc
 2940
 agagaccgtc tgcagtactt ggaggcactc gtccagttag tgtccaggct aaacagccgc
 3000
 ttccttgctt tctgttggga gcctctgccc tgggaagctg cgggactggc cttggggtaa
 3060
 aggtgggtct gcagggccaa gcctgtgcca gcagccagga ggttacacac tgggggggat
 3120
 cagaaaacga gccccagccc tgaggggccc
 3149

<210> 3756

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3756

Met	Asn	Leu	Cys	Ser	Lys	Cys	Phe	Ala	Asp	Phe	Gln	Lys	Lys	Gln	Pro
1			5						10					15	
Asp	Asp	Asp	Ser	Ala	Pro	Ser	Thr	Ser	Asn	Ser	Gln	Ser	Asp	Leu	Phe
			20					25					30		
Ser	Glu	Glu	Thr	Thr	Ser	Asp	Asn	Asn	Thr	Ser	Ile	Thr	Thr	Pro	
			35				40				45				
Thr	Leu	Ser	Pro	Ser	Gln	Gln	Pro	Leu	Pro	Thr	Glu	Leu	Asn	Val	Thr
			50			55					60				
Ser	Pro	Ser	Lys	Glu	Glu	Cys	Gly	Pro	Cys	Thr	Asp	Thr	Ala	His	Val
65					70					75				80	
Ser	Leu	Ile	Thr	Pro	Thr	Lys	Arg	Ser	Cys	Gly	Thr	Asp	Ser	Gln	Ser
			85						90					95	
Glu	Asn	Glu	Ala	Ser	Pro	Val	Lys	Arg	Pro	Arg	Leu	Leu	Glu	Asn	Thr
			100					105					110		
Glu	Arg	Ser	Glu	Glu	Thr	Ser	Arg	Ser	Lys	Gln	Lys	Ser	Arg	Arg	Arg
			115				120				125				
Cys	Phe	Gln	Cys	Gln	Thr	Lys	Leu	Glu	Leu	Val	Gln	Gln	Glu	Leu	Gly
			130			135					140				
Ser	Cys	Arg	Cys	Gly	Tyr	Val	Phe	Cys	Met	Leu	His	Arg	Leu	Pro	Glu

145		150		155		160
Gln His Asp Cys Thr Phe Asp His Met Gly Arg Gly Arg Glu Glu Ala						
		165		170		175
Ile Met Lys Met Val Lys Leu Asp Arg Lys Val Gly Arg Ser Cys Gln						
		180		185		190
Arg Ile Gly Glu Gly Cys Ser						
195						

<210> 3757

<211> 1046

<212> DNA

<213> Homo sapiens

<400> 3757

```

nnacgcgtag cctcgccggg aagccaggcg tcgttcctcc ggtccatctc gctcatgctc
60
agggcggtgg ccaccagca gcgcgccgcc gtgttcgtgg acaaggagaa cctcaccatg
120
ccgggcctca ggttcgacaa catccaggga gatgcagtta aagacttgat gcttcgcttt
180
ctgggtgaaa aagctgcagc aaagagacaa gtcctaaatg ccgactcagt ggaacaatct
240
tttgttgat tgaaacagct aatccgttga caaatggcat gccctccgt gccgtcagca
300
cactgacctt gtcaccatta ctaacggctg gctggcgctg cttccagcaa gagctgcaga
360
aactggaggg cagcagtgga cctgtgcgga cgtctcctca cagcccacgg ccagggtac
420
ggcaagagcg ggctgctcac cagccacacg acagattcac tgcagctctg gtttgtcagg
480
ctggcactac tagtgaagtt gggccttttc cagaatgctg agatggaatt tgaacccttc
540
ggaaatcttg atcagccaga tctttattcc gactactacc cgcacgtgta ccctgggcgc
600
aggggtccca tggccccctt ctgatgcgc atcttgacag cggagcttca gcagtacctg
660
gggaaccac aggagtcgct ggatagactg cacaaggta agactgtctg cagcaaggta
720
ggtggcgctg tcattcttcc ctgccacggg gagaacatgc cctccacgcc ctccccacag
780
gacatgcccc tgctgttccc tgcccgctct gcccacatgca ccacgctgc ttctgccttc
840
agaaggctag gtgaccaggg tttgtgtggc ctggtagtgc tggctcttgc tgaaatcttt
900
tttagggatg gtaagagttt ctagcagagc ttgagtcctg taattcttac tgcttggtac
960
tatgggaagc tgaaaggcag agacatcttt cttgccaaagg ctgccagctg aagcttcaag
1020
gtcagtgtgc cagccccccc tgggtgt
1046

```

<210> 3758

<211> 199

<212> PRT

<213> Homo sapiens

<400> 3758

Arg Leu Ala Gly Ala Ala Ser Ser Lys Ser Cys Arg Asn Trp Arg Ala
 1 5 10 15
 Ala Val Asp Leu Cys Gly Arg Leu Leu Thr Ala His Gly Gln Gly Tyr
 20 25 30
 Gly Lys Ser Gly Leu Leu Thr Ser His Thr Thr Asp Ser Leu Gln Leu
 35 40 45
 Trp Phe Val Arg Leu Ala Leu Leu Val Lys Leu Gly Leu Phe Gln Asn
 50 55 60
 Ala Glu Met Glu Phe Glu Pro Phe Gly Asn Leu Asp Gln Pro Asp Leu
 65 70 75 80
 Tyr Ser Glu Tyr Tyr Pro His Val Tyr Pro Gly Arg Arg Gly Ser Met
 85 90 95
 Val Pro Phe Ser Met Arg Ile Leu His Ala Glu Leu Gln Gln Tyr Leu
 100 105 110
 Gly Asn Pro Gln Glu Ser Leu Asp Arg Leu His Lys Val Lys Thr Val
 115 120 125
 Cys Ser Lys Val Gly Gly Ala Val Ile Leu Pro Cys His Gly Glu Asn
 130 135 140
 Met Pro Ser Thr Pro Ser Pro Gln Asp Met Pro Val Leu Phe Pro Ala
 145 150 155 160
 Arg Pro Ala Pro Cys Thr Ile Ala Ala Ser Ala Phe Arg Arg Leu Gly
 165 170 175
 Asp Pro Gly Leu Cys Gly Leu Val Val Val Ala Leu Ala Glu Ile Phe
 180 185 190
 Phe Arg Asp Gly Lys Ser Phe
 195

<210> 3759

<211> 830

<212> DNA

<213> Homo sapiens

<400> 3759

ngtcgaatat ccatgcagac tagatacgtt cttaagaaac agcaataaag ctctctatgg
 60
 tctcatccag aagtgtaaaa acagatatag tgccttcaac taccgggcaa caggagaaga
 120
 agagcaaagg caggcggacg agctcctgga aaaaattgag agcatggtgc atcagaatgg
 180
 gaacaagcat tgtgttttca gagaaaaaga aaccctgaac attgtccttg tggggagaag
 240
 cgggactggg aagagtgcga cggggaactc tatcctgggg agcctcgtct tcacctctcg
 300
 gctccgggcc cagccagtca ccaagaccag ccagagtggc aggaggacat gggacggaca
 360
 ggaggtggtg gttgtggaca cccttccttc aaccagatgc tggatgtcaa aggaccatc
 420
 ccggttaaaa gaggaggtca agcgctgttt gtctgtctgt gaaaaagggg acacattttt
 480
 gtctgtgtgt tccagctggg acgattcact gaagaggaca aaacagctgt ggcgaaactg
 540

gaggccatct ttggagcaga ctttacgaaa tacgcgatta tgctgttcac ccggaaggaa
 600
 gacctagggg cggggaattt ggaagacttc atgaagaact cagataacaa agcccttcgg
 660
 cgcatttttaa aaaagtgggg ggggagagtt tgtgctttta acaacaaaga aacaggccag
 720
 gcccaggaaa cccaggtgaa agctctttta acaaaggtca atgatctgag aaaagaaagt
 780
 gggtggtccg ggtatcccca tacacaggag aacgtcagcc cttcacgcgt
 830

<210> 3760

<211> 100

<212> PRT

<213> Homo sapiens

<400> 3760

Glu	His	Gly	Ala	Ser	Glu	Trp	Glu	Gln	Ala	Leu	Cys	Phe	Gln	Arg	Lys
1				5					10					15	
Arg	Asn	Pro	Glu	His	Cys	Pro	Cys	Gly	Glu	Lys	Arg	Asp	Trp	Glu	Glu
			20					25					30		
Cys	Asp	Arg	Glu	Leu	Tyr	Pro	Gly	Glu	Pro	Arg	Leu	His	Leu	Ser	Ala
		35					40					45			
Pro	Gly	Pro	Ala	Ser	His	Gln	Asp	Gln	Pro	Glu	Trp	Gln	Glu	Asp	Met
		50				55					60				
Gly	Arg	Thr	Gly	Gly	Gly	Gly	Cys	Gly	His	Pro	Ser	Phe	Asn	Gln	Met
				70						75				80	
Leu	Asp	Val	Lys	Gly	Pro	Ile	Pro	Val	Lys	Arg	Gly	Gly	Gln	Ala	Leu
				85					90					95	
Phe	Val	Leu	Leu												
															100

<210> 3761

<211> 458

<212> DNA

<213> Homo sapiens

<400> 3761

acgcgtgcag gtggcaccca gcgcctcag gtgcgtaccc cgcccccgcc gccgacgccg
 60
 ccgacgccgc cattaagggc gggttgcctt tcggaacgtc ctctctctga gggcctgggg
 120
 aaggagggcc gcccgccgc agcgggaggt ggcccccgcc gacaccccgcc cgccccgagg
 180
 cgaggcacc cccaaccccg atccctgctg gcaggaccag aggtgtgagg gtggggggcg
 240
 ggaagccttg ccgcgggggc aatggtcgta cgcacggagc gcacatccct ctctctctg
 300
 attggccgag cgggggtgtg cgtgatgcca cgctccgccc gtcgtacgtg gggcgctcgc
 360
 gctgcgtgca gacgcgcttg attgggtaga taagggggcg ggggcccccg ctgttaccag
 420
 gcaactgcgc cccggatccg cccctgacg tcacgcgt
 458

<210> 3762
 <211> 75
 <212> PRT
 <213> Homo sapiens

<400> 3762
 Thr Arg Ala Gly Gly Thr Gln Arg Pro Gln Val Arg Thr Pro Pro Pro
 1 5 10 15
 Pro Pro Thr Pro Pro Thr Pro Pro Leu Arg Ala Gly Cys Leu Ser Glu
 20 25 30
 Arg Pro Pro Pro Glu Gly Leu Gly Lys Gly Gly Arg Pro Ala Ala Ala
 35 40 45
 Gly Gly Gly Pro Pro Gly His Pro Gly Ala Pro Arg Arg Gly Thr Pro
 50 55 60
 Glu Pro Arg Ser Leu Leu Ala Gly Pro Glu Val
 65 70 75

<210> 3763
 <211> 1340
 <212> DNA
 <213> Homo sapiens

<400> 3763
 nnggcgtccg ctctctcccc tcgcggtcgg tagagctggc tgcgcgcgagc ccctgcacg
 60
 ctgcacatgg ggcgcctgac ggaagcggcg gcagcgggca gcggctctcg ggctgcaggc
 120
 tgggcagggt cccctccac gctcctgccg ctgtctccca cgtccccag gtgcgcggcc
 180
 accatggcgt ccagcgacga ggacggcacc aacggcggcg cctcggaggc cggcgaggac
 240
 cgaggaggctc ccggcaagcg gaggcgcctg gggttcttgg ccaccgcctg gctcaccttc
 300
 tacgacatcg ccatgaccgc ggggtggttg gttctagcta ttgccatggt acgtttttat
 360
 atggaaaagg gaacacacag agggttatat aaaagtattc agaagacact taaatttttc
 420
 cagacatttg ccttgcttga gatagttcac tgtttaattg gaattgtacc tacttctgtg
 480
 attgtgactg gggccaagt gagctcaaga atctttatgg tgtggctcat tactcacagt
 540
 ataaaaccaa tccagaatga agagagtgtg gtgctttttc tggtcgcgtg gactgtgaca
 600
 gagatcactc gctattcctt ctacacattc agccttcttg accacttgcc atacttcatt
 660
 aaatgggcca gatataattt ttttatcatc ttatatcctg ttggagttgc tggatgaactt
 720
 cttacaatat acgctgcctt gccgtatgtg aagaaaacag gaatgttttc aataagactt
 780
 cctaacaaat acaatgtctc ttttgactac tattattttc ttcttataac catggcatca
 840
 tatatacctt tgtttccaca actctatttt catatgttac gtcaaagaag aaaggtgctt
 900

catggagagg tgattgtaga aaaggatgat taaatgatct ctgcaaacaa ggtgcttttt
 960
 ccagaataac caagattacc tgagtccaag ttttaataac aagaataaac aactttgtga
 1020
 aatatcatgg attgtatggg ttcttaaaat ataacttgag acacgtggta tttgccagta
 1080
 tttgtgttcc tcttgtgcca gatctatttt ttacaagaac tgtgccaata tcagtaactt
 1140
 ttgggtaggt attgattatt aggaaaataa ttaggtgtat tatctggggg aaaaaaaaaac
 1200
 ttttgctaag ttttttttga aacatgctca aagcttttta aatcaatatt tagaaattag
 1260
 tttaatgatt tactattata cctgctagtg atatttatgt gatatttaca aatgaaaatt
 1320
 aatgcaaaaat ttttaacaaa
 1340

<210> 3764

<211> 288

<212> PRT

<213> Homo sapiens

<400> 3764

Met	Gly	Arg	Leu	Thr	Glu	Ala	Ala	Ala	Ala	Gly	Ser	Gly	Ser	Arg	Ala
1				5					10					15	
Ala	Gly	Trp	Ala	Gly	Ser	Pro	Pro	Thr	Leu	Leu	Pro	Leu	Ser	Pro	Thr
			20					25					30		
Ser	Pro	Arg	Cys	Ala	Ala	Thr	Met	Ala	Ser	Ser	Asp	Glu	Asp	Gly	Thr
		35					40					45			
Asn	Gly	Gly	Ala	Ser	Glu	Ala	Gly	Glu	Asp	Arg	Glu	Ala	Pro	Gly	Lys
	50					55					60				
Arg	Arg	Arg	Leu	Gly	Phe	Leu	Ala	Thr	Ala	Trp	Leu	Thr	Phe	Tyr	Asp
65					70				75					80	
Ile	Ala	Met	Thr	Ala	Gly	Trp	Leu	Val	Leu	Ala	Ile	Ala	Met	Val	Arg
			85					90						95	
Phe	Tyr	Met	Glu	Lys	Gly	Thr	His	Arg	Gly	Leu	Tyr	Lys	Ser	Ile	Gln
		100					105						110		
Lys	Thr	Leu	Lys	Phe	Phe	Gln	Thr	Phe	Ala	Leu	Leu	Glu	Ile	Val	His
	115					120						125			
Cys	Leu	Ile	Gly	Ile	Val	Pro	Thr	Ser	Val	Ile	Val	Thr	Gly	Val	Gln
	130					135					140				
Val	Ser	Ser	Arg	Ile	Phe	Met	Val	Trp	Leu	Ile	Thr	His	Ser	Ile	Lys
145					150				155					160	
Pro	Ile	Gln	Asn	Glu	Glu	Ser	Val	Val	Leu	Phe	Leu	Val	Ala	Trp	Thr
			165						170					175	
Val	Thr	Glu	Ile	Thr	Arg	Tyr	Ser	Phe	Tyr	Thr	Phe	Ser	Leu	Leu	Asp
	180							185					190		
His	Leu	Pro	Tyr	Phe	Ile	Lys	Trp	Ala	Arg	Tyr	Asn	Phe	Phe	Ile	Ile
	195					200						205			
Leu	Tyr	Pro	Val	Gly	Val	Ala	Gly	Glu	Leu	Leu	Thr	Ile	Tyr	Ala	Ala
	210					215					220				
Leu	Pro	Tyr	Val	Lys	Lys	Thr	Gly	Met	Phe	Ser	Ile	Arg	Leu	Pro	Asn
225				230					235				240		
Lys	Tyr	Asn	Val	Ser	Phe	Asp	Tyr	Tyr	Tyr	Phe	Leu	Leu	Ile	Thr	Met

				245					250					255	
Ala	Ser	Tyr	Ile	Pro	Leu	Phe	Pro	Gln	Leu	Tyr	Phe	His	Met	Leu	Arg
			260					265					270		
Gln	Arg	Arg	Lys	Val	Leu	His	Gly	Glu	Val	Ile	Val	Glu	Lys	Asp	Asp
			275				280						285		

<210> 3765

<211> 2764

<212> DNA

<213> Homo sapiens

<400> 3765

```

ngagtggctg ttgagcggcg ccgcgggagt tccgcagggt tcccgtgttc gcagcggagc
60
cggaggccag ctgaaccggg ccgtgggatc ccgatagga ggaggagggg acccatagga
120
cgcgtaaca tggacctgga aaacaaagtg aagaagatgg gcttaggtca cgagcaagga
180
tttggagccc cttgtttaaa atgcaaagaa aaatgtgaag gattcgaact gcacttctgg
240
agaaaaatat gtcgtaactg caagtgtggc caagaagagc atgatgtcct cttgagcaat
300
gaagaggatc gaaaagtggg aaaacttttt gaagacacca agtataccac tctgattgca
360
aaactaaagt cagatggaat tcccatgtat aaacgcaatg ttatgatatt gacgaatcca
420
gttgctgcca agaagaatgt ctccatcaat acagttacct atgagtgggc tcctcctgtc
480
cagaatcaag cattggccag gcagtacatg cagatgctac ccaaggaaaa gcagccagta
540
gcaggctcag agggggcaca gtaccggaag aagcagctgg caaagcagct ccctgcacat
600
gaccaggacc cttcaaagtg ccatgagttg tctcccagag aggtgaagga gatggagcag
660
tttgtgaaga aatataagag cgaagctctg ggagtaggag atgtcaaact tccctgtgag
720
atggatgccc aaggccccc aaatgaac attcctggag gggatagaag caccacagca
780
gcagtggggg ccatggagga caaatctgct gagcacaaaa gaactcaata ttcctgctat
840
tgctgcaaac tgagtatgaa agaaggtgac ccagccatct atgccgaaag ggctggctat
900
gataaactgt ggcacccagc ttgttttgtc tgcagcacct gccatgaact cctggttgac
960
atgatttatt tttggaagaa tgagaagcta tactgtggca gacattactg tgacagcgag
1020
aaaccccgat gtgctggctg tgacgagctg atattcagca atgagtatac ccaggcagaa
1080
aaccagaatt ggcacctgaa acacttctgc tgctttgact gtgatagcat tctagctggg
1140
gagatatacg tgatgggtaa tgacaagccc gtgtgcaagc cctgctatgt gaagaatcac
1200
gctgtggtgt gtcaaggatg ccacaatgcc atcgaccagc aagtgcagcg ggtgacctat
1260

```

aacaatttca gctggcatgc atccacagag tgctttctgt gctcttgctg cagcaaatgc
1320
ctcattgggc agaagttcat gccagtagaa gggatgggtt tctgttcagt ggaatgtaag
1380
aagaggatgt cttaggagga gggcaccacag aagtatcgag ccatagctat ccaaagtggg
1440
ctgcatttct actgtaaaat gcaatttgaa aaaaataaaa cgcaaaaaaa gaaactgtaa
1500
aggaaaccaa gagattttgt ttaatttttt tggccatttt ttcttcatca attttttttc
1560
gggtctcaact tttaaacttg gtttaagcat ttgatttgta aaacagtaaa taattgtatc
1620
tttccatagc ttttcaaagtg tgaaatcatt tttggaagct tggatctcat taaacttcat
1680
gtctctattc catttgtgcc acacacttaa aagttagtgt actgaatgga aagatgagca
1740
ttcctagtgc tacacttctt ttttccccct catgtgtaaa atgaaaagaa aactaaattt
1800
gccctaatac caaggcgcta cgtttattgc ctctgtttat tcaactgacct ttgtaatgat
1860
acacagtga ttttttttga caaagagaaa tgcagtgtag tatgcagagc tgctgtttta
1920
atgccctatg catttactct ttcttgattt aggcagaggt ggcattttct ttattgcatt
1980
tctctatttt tttaatgtac cctaccttca gtattctctt tgtaagttgg tgacttgcat
2040
ctgtggcctt gaatattttt ttatcacatg tggcataaca gtatccacac tttttagttc
2100
tttatttttt tttttttatt ttgagcaatt ctctgcctc agcctcccaa atagctggga
2160
ttacaggtgc atgccaccac acccagctaa tttttgtatt tttagtagag acagggtttc
2220
accatgttag ccaggctggg ctcaaactcc tgacctcaga tgatccgctt gccttggcct
2280
cccaaagtgc tgggattaca ggtgtgggag ccaccatgcc tgacccacac actttttact
2340
tgtatagatg atttttggct tggacataaa agccaagcca cccatttgc tttaatccaa
2400
agaacatgta tagtttttgt acccagagac tatgatttat attgattgca cttgcctgcc
2460
atgatttaga taagattttt ttgcatggg ttttattctt tcctaattgga tctgtttta
2520
taataacttc aagcctgtcc atggatatat caaatgtctt cacttgata ttttcatggc
2580
taggtatttc taatgtttat tcttccctgt gtacttctac acatagctat gcactatgaa
2640
aattaaatgg aatgaatgat atgtatatta ctcatccat ttaattttca tagtgcatag
2700
ctatgaaaat taaatggaat gaatgatatg tatattactc aaaataaagt ttctttcact
2760
ttaa
2764

<210> 3766

<211> 464

<212> PRT

<213> Homo sapiens

<400> 3766

```

Xaa Val Ala Val Glu Arg Arg Arg Gly Ser Ser Ala Gly Phe Pro Cys
 1           5           10           15
Ser Gln Arg Ser Arg Arg Pro Ala Glu Pro Gly Arg Gly Ile Pro Asp
          20           25           30
Arg Arg Arg Arg Gly Pro Ile Gly Arg Val Asn Met Asp Leu Glu Asn
          35           40           45
Lys Val Lys Lys Met Gly Leu Gly His Glu Gln Gly Phe Gly Ala Pro
          50           55           60
Cys Leu Lys Cys Lys Glu Lys Cys Glu Gly Phe Glu Leu His Phe Trp
65           70           75           80
Arg Lys Ile Cys Arg Asn Cys Lys Cys Gly Gln Glu Glu His Asp Val
          85           90           95
Leu Leu Ser Asn Glu Glu Asp Arg Lys Val Gly Lys Leu Phe Glu Asp
          100          105          110
Thr Lys Tyr Thr Thr Leu Ile Ala Lys Leu Lys Ser Asp Gly Ile Pro
          115          120          125
Met Tyr Lys Arg Asn Val Met Ile Leu Thr Asn Pro Val Ala Ala Lys
          130          135          140
Lys Asn Val Ser Ile Asn Thr Val Thr Tyr Glu Trp Ala Pro Pro Val
145          150          155          160
Gln Asn Gln Ala Leu Ala Arg Gln Tyr Met Gln Met Leu Pro Lys Glu
          165          170          175
Lys Gln Pro Val Ala Gly Ser Glu Gly Ala Gln Tyr Arg Lys Lys Gln
          180          185          190
Leu Ala Lys Gln Leu Pro Ala His Asp Gln Asp Pro Ser Lys Cys His
          195          200          205
Glu Leu Ser Pro Arg Glu Val Lys Glu Met Glu Gln Phe Val Lys Lys
          210          215          220
Tyr Lys Ser Glu Ala Leu Gly Val Gly Asp Val Lys Leu Pro Cys Glu
225          230          235          240
Met Asp Ala Gln Gly Pro Lys Gln Met Asn Ile Pro Gly Gly Asp Arg
          245          250          255
Ser Thr Pro Ala Ala Val Gly Ala Met Glu Asp Lys Ser Ala Glu His
          260          265          270
Lys Arg Thr Gln Tyr Ser Cys Tyr Cys Cys Lys Leu Ser Met Lys Glu
          275          280          285
Gly Asp Pro Ala Ile Tyr Ala Glu Arg Ala Gly Tyr Asp Lys Leu Trp
          290          295          300
His Pro Ala Cys Phe Val Cys Ser Thr Cys His Glu Leu Leu Val Asp
305          310          315          320
Met Ile Tyr Phe Trp Lys Asn Glu Lys Leu Tyr Cys Gly Arg His Tyr
          325          330          335
Cys Asp Ser Glu Lys Pro Arg Cys Ala Gly Cys Asp Glu Leu Ile Phe
          340          345          350
Ser Asn Glu Tyr Thr Gln Ala Glu Asn Gln Asn Trp His Leu Lys His
          355          360          365
Phe Cys Cys Phe Asp Cys Asp Ser Ile Leu Ala Gly Glu Ile Tyr Val
          370          375          380
Met Val Asn Asp Lys Pro Val Cys Lys Pro Cys Tyr Val Lys Asn His

```

385		390		395		400									
Ala	Val	Val	Cys	Gln	Gly	Cys	His	Asn	Ala	Ile	Asp	Pro	Glu	Val	Gln
			405						410					415	
Arg	Val	Thr	Tyr	Asn	Asn	Phe	Ser	Trp	His	Ala	Ser	Thr	Glu	Cys	Phe
			420					425					430		
Leu	Cys	Ser	Cys	Cys	Ser	Lys	Cys	Leu	Ile	Gly	Gln	Lys	Phe	Met	Pro
		435					440					445			
Val	Glu	Gly	Met	Val	Phe	Cys	Ser	Val	Glu	Cys	Lys	Lys	Arg	Met	Ser
	450					455					460				

<210> 3767

<211> 2439

<212> DNA

<213> Homo sapiens

<400> 3767

```

ntttttttta tagtttaatg tattttaata gcaagtata taccacgagg agcaaatggc
60
acatggaccc tccgtccttg ggggtggacag aaccaactgc tctgtcact gtttcttacc
120
gggcccagac acgccccaga gccccgcaca ggccagttgc tactgccagt cgtgaggcga
180
accacactgc tgacccaaag ccatgccggt tccaccatga gactgagtgt gggcacttgt
240
gagcgtgctt ctggggcgca caggcgctct gacggggcca agtgagaatt ccagtgcgcc
300
agtatagtat atacaatata attaggagag aaagaagcag gatatgaaaa catacttttt
360
gttattggca tgaaaggcca tggctctgtc catgtcccca gactgtgata agccagggtta
420
aactccagca cctgaaagggt gttctcacct gcagtgaatc tgtcgtgtgg ctggtgagca
480
gcccgctctt gccgtagccc tggccgtggg ctgtgaggag acgtccgcac aggtccactg
540
ctgccctcca gtttctgcag ctgattagct gtttcaatcc aacaaaagat tgttccactg
600
agtcggcatt taggacttgt ctctttgctg cagctttttc acccagaaag cgaagcatca
660
agtctttaac tgcactctcc tggatgttgt cgaacctgag gcccggcagtg gtgaggttct
720
ccttgctccac gaacacggcg ccgcgtgct ggggtggccac ggcccgcagg gcccagga
780
gctgcgcccc cggcgctgcc agagcctttc gcgcacatcc aggcagtgtt tgcagggagt
840
gacgaccctt ttgccaccgc cctgagcatg ggcgagatgg accggaggaa cgacgcctgg
900
cttcccggcg aggetacgcg tggagtcttg cgggccgtgg ccaccagca gcgcggcgcc
960
gtgttcgtgg acaaggagaa cctcaccatg ccgggcctca ggttcgacaa catccaggga
1020
gatgcagtta aagacttgat gcttcgcttt ctgggtgaaa aagctgcagc aaagagacaa
1080
gtcctaaatg ccgactcagt ggaacaatct tttgttggat tgaaacagct aatcagctgc
1140

```

agaaactgga gggcagcagt ggacctgtgc ggacgtctcc tcacagccca cggccagggc
 1200
 tacggcaaga gcgggctgct caccagccac acgacagatt cactgcagct ctggtttgct
 1260
 aggctggcac tactagtga gttgggcctt ttccagaatg ctgagatgga atttgaaccc
 1320
 ttcggaatc ttgatcagcc agatctttat tacgagtact acccgcacgt gtaccctggg
 1380
 cgcaggggct ccatgggtccc cttctcgatg cgcattctgc acgcggagct tcagcagtac
 1440
 ctggggaacc cacaggagtc gctggataga ctgcacaagg tgaagactgt ctgcagcaag
 1500
 atcctggcca atttggagca aggcttagca gaagacggcg gcatgagcag cgtgactcag
 1560
 gagggcagac aagcctctat ccggtctgtg aggtcacgtc tgggccgggt gatgtactcc
 1620
 atggcaaact gtctgctcct gatgaaggat tatgtgctgg ccgtggaggc gtatcattcg
 1680
 gttatcaagt attaccaga gcaagagccc cagctgctca gcggcatcgg ccggatttcc
 1740
 ctccagattg gagacataaa aacagctgaa aagtattttc aagacgttga gaaagtaaca
 1800
 cagaattag atggactaca gggtaaaatc atggttttga tgaacagcgc gttccttcac
 1860
 ctcgggcaga ataactttgc agaagcccac aggttcttca cagagatctt aaggatggat
 1920
 ccaagaaacg cagtggccaa caacaacgct gccgtgtgtc tgctctacct gggcaagctc
 1980
 aaggactccc tgcggcagct ggaggccatg gtccagcagg accccaggca ctacctgcac
 2040
 gagagcgtgc tcttcaacct gaccaccatg tacgagctgg agtcctcacg gagcatgcag
 2100
 aagaaacagg ccctgctgga ggctgtcgcc ggcaaggagg gggacagctt caacacacag
 2160
 tgctcaagc tggcctagct gcctccaaca cactacgtca gaaggacctg ggtctttgaa
 2220
 actgtgtctt gaagctaattg tattaatgtg acatggagga actcaataaa actccttttc
 2280
 tctttanttt tctaaagttt gactatgctg tgtcttattt tacatttctg tagatttatt
 2340
 gtgtttttta ttcactcagc ttcaatctgt atgtttatgt ctttcaccaa attggaaagt
 2400
 ttttcacttt gattatttga ttttatattg ctttgatea
 2439

<210> 3768

<211> 379

<212> PRT

<213> Homo sapiens

<400> 3768

Met	Leu	Arg	Phe	Leu	Gly	Glu	Lys	Ala	Ala	Ala	Lys	Arg	Gln	Val	Leu
1				5					10					15	
Asn	Ala	Asp	Ser	Val	Glu	Gln	Ser	Phe	Val	Gly	Leu	Lys	Gln	Leu	Ile

20										25					30				
Ser	Cys	Arg	Asn	Trp	Arg	Ala	Ala	Val	Asp	Leu	Cys	Gly	Arg	Leu	Leu				
		35					40					45							
Thr	Ala	His	Gly	Gln	Gly	Tyr	Gly	Lys	Ser	Gly	Leu	Leu	Thr	Ser	His				
		50					55					60							
Thr	Thr	Asp	Ser	Leu	Gln	Leu	Trp	Phe	Val	Arg	Leu	Ala	Leu	Leu	Val				
65					70					75					80				
Lys	Leu	Gly	Leu	Phe	Gln	Asn	Ala	Glu	Met	Glu	Phe	Glu	Pro	Phe	Gly				
				85					90					95					
Asn	Leu	Asp	Gln	Pro	Asp	Leu	Tyr	Tyr	Glu	Tyr	Tyr	Pro	His	Val	Tyr				
				100					105					110					
Pro	Gly	Arg	Arg	Gly	Ser	Met	Val	Pro	Phe	Ser	Met	Arg	Ile	Leu	His				
				115					120					125					
Ala	Glu	Leu	Gln	Gln	Tyr	Leu	Gly	Asn	Pro	Gln	Glu	Ser	Leu	Asp	Arg				
						130			135					140					
Leu	His	Lys	Val	Lys	Thr	Val	Cys	Ser	Lys	Ile	Leu	Ala	Asn	Leu	Glu				
145					150					155					160				
Gln	Gly	Leu	Ala	Glu	Asp	Gly	Gly	Met	Ser	Ser	Val	Thr	Gln	Glu	Gly				
				165					170					175					
Arg	Gln	Ala	Ser	Ile	Arg	Leu	Trp	Arg	Ser	Arg	Leu	Gly	Arg	Val	Met				
				180					185					190					
Tyr	Ser	Met	Ala	Asn	Cys	Leu	Leu	Leu	Met	Lys	Asp	Tyr	Val	Leu	Ala				
				195					200					205					
Val	Glu	Ala	Tyr	His	Ser	Val	Ile	Lys	Tyr	Tyr	Pro	Glu	Gln	Glu	Pro				
						210			215					220					
Gln	Leu	Leu	Ser	Gly	Ile	Gly	Arg	Ile	Ser	Leu	Gln	Ile	Gly	Asp	Ile				
225					230					235					240				
Lys	Thr	Ala	Glu	Lys	Tyr	Phe	Gln	Asp	Val	Glu	Lys	Val	Thr	Gln	Lys				
				245					250					255					
Leu	Asp	Gly	Leu	Gln	Gly	Lys	Ile	Met	Val	Leu	Met	Asn	Ser	Ala	Phe				
				260					265					270					
Leu	His	Leu	Gly	Gln	Asn	Asn	Phe	Ala	Glu	Ala	His	Arg	Phe	Phe	Thr				
				275					280					285					
Glu	Ile	Leu	Arg	Met	Asp	Pro	Arg	Asn	Ala	Val	Ala	Asn	Asn	Asn	Ala				
						290			295					300					
Ala	Val	Cys	Leu	Leu	Tyr	Leu	Gly	Lys	Leu	Lys	Asp	Ser	Leu	Arg	Gln				
305					310					315					320				
Leu	Glu	Ala	Met	Val	Gln	Gln	Asp	Pro	Arg	His	Tyr	Leu	His	Glu	Ser				
				325					330					335					
Val	Leu	Phe	Asn	Leu	Thr	Thr	Met	Tyr	Glu	Leu	Glu	Ser	Ser	Arg	Ser				
				340					345					350					
Met	Gln	Lys	Lys	Gln	Ala	Leu	Leu	Glu	Ala	Val	Ala	Gly	Lys	Glu	Gly				
				355															

<210> 3769

<211> 1931

<212> DNA

<213> Homo sapiens

<400> 3769

nacgcgtgta cgtcatggag gatatcacat tcaacgtgaa ggttgcttca ggtgaatgca
60

atgaagacac tgaagtttac aacatcaccc tgtgtactgg ggatgaactc actctaattgg
120
ggcaggcaga aatcctttat gcaaagacat tcaaggaaaa gtcacgactc aacacaattct
180
tcaaaaagat tgggaagctc aattccatca gcaagctggg aaaaggcaaa atgccgtgcc
240
tcatttgtat gaatcacccg accaacgaaa gcattagcct tccattccag tgcaagggca
300
gatttagcac ccgaagtccc ctggaacttc agatgcaaga gggcgaacac accatccgca
360
acattgtgga gaaaaccagg ctctctgtga atgtgactgt gccaaagcct ccaccgagaa
420
accatacga cctccacttc atccgtgagg ggcaccgcta taagtttgtg agcatccaga
480
ccaagacggg ggtggtttgc tgtgtgctgc ggaacaacaa gatcctcccc atgcactttc
540
ctttgcactt gactgtcccc aagttcagcc tcccagaacc cctggtgaag ggagagagct
600
ggcccgaac cctggtccca tcccgggcta ggtatctgcc aagaacagtt cgacatcgat
660
gagtattcac gggctgtccg tgatgtgaaa accgactgga atgaagaatg caagagcccc
720
aagaagggc ggtgctctgg ccacaaccac gtgcccatt cgctcagcta cgcccgcat
780
gagctacccc agtccttcca ccgactctcg gtctgtgtgt atggcaacaa tctccatggc
840
aacagtgagg tgaaccttca tgggtgcagg gacctggggg gagattgggc tccctttcct
900
catgacatcc tgccctatca ggactctgga gatagtggga gcgactacct tttcccagaa
960
gctagtgaag aatcagcagg catcccggga aagtcagaac ttccctacga agagctgtgg
1020
ctggaggaag gcaagcccag ccatcagcct ctcaactcgct ctctgagcga gaagaacaga
1080
tgtgatcagt ttagagggtc tgtccgatcc aaatgtgcga cttctcctct tcccatcct
1140
gggactctgg gagcagcagt gaagtcttca gatactgcc tacctccacc tccagtgcct
1200
cccaaactcg aagcgtcag agaagaatgc cggctcctga acgccccacc tgttccacc
1260
cgaagcgcaa agcctttgtc caccagtccc tccatccctc ctgcacagt caagccagcg
1320
cggcaacaga ctgctctcc cagccccacc ttgtcctact attcttcagg gctacacaac
1380
atcgtaacta aaactgacac aaatccttct gaaagcactc ctgtttcctg ctatccatgt
1440
aaccgagtga aaactgattc tgtggacctg aaatccccgt ttggaagtcc ttctgtgaa
1500
gctgtgtcct ctgggtctc atggcctaac cattattcag gagcatcaga aagccagacc
1560
aggagtgact tctgtgtgga tccaagcagg agttatagtt accctagaca aaagacgcca
1620
ggcacaccaa agagaaactg ccagcacct tttgattttg atggctgtga gtcctgggc
1680

agccccacta gccagtcac tgcagaattc agtagcagcg tctctggttg tcccaagtca
 1740
 gccagctact ctctggagag cacagatgtg aaatctcttg cagctggtgt gacaaagcag
 1800
 agtacgtcat gccctgcctt accccccagg gtcctcaaac tagtggaaga gaaggctcgcc
 1860
 tccgaaacat ctcctttgcc tctgaaaatt gatggtgctg aggaagaccc caagtctggg
 1920
 tcaccagatc t
 1931

<210> 3770

<211> 447

<212> PRT

<213> Homo sapiens

<400> 3770

Arg	Glu	Arg	Ala	Gly	Pro	Lys	Pro	Trp	Ser	His	Pro	Gly	Leu	Gly	Ile
1				5					10					15	
Cys	Gln	Glu	Gln	Phe	Asp	Ile	Asp	Glu	Tyr	Ser	Arg	Ala	Val	Arg	Asp
			20					25					30		
Val	Lys	Thr	Asp	Trp	Asn	Glu	Glu	Cys	Lys	Ser	Pro	Lys	Lys	Gly	Arg
		35					40					45			
Cys	Ser	Gly	His	Asn	His	Val	Pro	Asn	Ser	Leu	Ser	Tyr	Ala	Arg	Asp
	50					55					60				
Glu	Leu	Thr	Gln	Ser	Phe	His	Arg	Leu	Ser	Val	Cys	Val	Tyr	Gly	Asn
65					70					75					80
Asn	Leu	His	Gly	Asn	Ser	Glu	Val	Asn	Leu	His	Gly	Cys	Arg	Asp	Leu
			85					90						95	
Gly	Gly	Asp	Trp	Ala	Pro	Phe	Pro	His	Asp	Ile	Leu	Pro	Tyr	Gln	Asp
			100					105					110		
Ser	Gly	Asp	Ser	Gly	Ser	Asp	Tyr	Leu	Phe	Pro	Glu	Ala	Ser	Glu	Glu
		115					120					125			
Ser	Ala	Gly	Ile	Pro	Gly	Lys	Ser	Glu	Leu	Pro	Tyr	Glu	Glu	Leu	Trp
		130				135						140			
Leu	Glu	Glu	Gly	Lys	Pro	Ser	His	Gln	Pro	Leu	Thr	Arg	Ser	Leu	Ser
145					150					155					160
Glu	Lys	Asn	Arg	Cys	Asp	Gln	Phe	Arg	Gly	Ser	Val	Arg	Ser	Lys	Cys
			165						170					175	
Ala	Thr	Ser	Pro	Leu	Pro	Ile	Pro	Gly	Thr	Leu	Gly	Ala	Ala	Val	Lys
			180					185						190	
Ser	Ser	Asp	Thr	Ala	Leu	Pro	Pro	Pro	Pro	Val	Pro	Pro	Lys	Ser	Glu
		195					200						205		
Ala	Val	Arg	Glu	Glu	Cys	Arg	Leu	Leu	Asn	Ala	Pro	Pro	Val	Pro	Pro
	210					215					220				
Arg	Ser	Ala	Lys	Pro	Leu	Ser	Thr	Ser	Pro	Ser	Ile	Pro	Pro	Arg	Thr
225					230					235					240
Val	Lys	Pro	Ala	Arg	Gln	Gln	Thr	Arg	Ser	Pro	Ser	Pro	Thr	Leu	Ser
			245						250					255	
Tyr	Tyr	Ser	Ser	Gly	Leu	His	Asn	Ile	Val	Thr	Lys	Thr	Asp	Thr	Asn
			260					265					270		
Pro	Ser	Glu	Ser	Thr	Pro	Val	Ser	Cys	Tyr	Pro	Cys	Asn	Arg	Val	Lys
		275					280					285			
Thr	Asp	Ser	Val	Asp	Leu	Lys	Ser	Pro	Phe	Gly	Ser	Pro	Ser	Ala	Glu

290	295	300
Ala Val Ser Ser Arg Leu Ser Trp Pro Asn His Tyr Ser Gly Ala Ser		
305	310	315
Glu Ser Gln Thr Arg Ser Asp Phe Leu Leu Asp Pro Ser Arg Ser Tyr		320
	325	330
Ser Tyr Pro Arg Gln Lys Thr Pro Gly Thr Pro Lys Arg Asn Cys Pro		335
	340	345
Ala Pro Phe Asp Phe Asp Gly Cys Glu Leu Leu Ala Ser Pro Thr Ser		350
	355	360
Pro Val Thr Ala Glu Phe Ser Ser Ser Val Ser Gly Cys Pro Lys Ser		365
	370	375
Ala Ser Tyr Ser Leu Glu Ser Thr Asp Val Lys Ser Leu Ala Ala Gly		380
385	390	395
Val Thr Lys Gln Ser Thr Ser Cys Pro Ala Leu Pro Pro Arg Ala Pro		400
	405	410
Lys Leu Val Glu Glu Lys Val Ala Ser Glu Thr Ser Pro Leu Pro Leu		415
	420	425
Lys Ile Asp Gly Ala Glu Glu Asp Pro Lys Ser Gly Ser Pro Asp		430
	435	440
		445

<210> 3771

<211> 1514

<212> DNA

<213> Homo sapiens

<400> 3771

```

ttcactattc atgatagtga attcaaagaa tatactaccc gtacccaacg tccgcctca
60
ggtatattag gagtaaccaa cctttttttt gctaagacac tccagcactg gccacacatt
120
attcgaatag gagaccttaa acctacaagt gaaattccta agcagggttaa agtgaaaaaa
180
ctgaagaatc taaagactct ggattccaaa cctggagttt atacttcata taagccatat
240
ttaaatagag atgaagagat cataaaacaa ttacagaagg gtgtacaaca gaaacgtcct
300
tctgaggctc aaagtgttat tcttcgacgc tatttttttg aactgacaca aagtttcatc
360
attccattag aaagatatgt ggcaagcttg atgcctttgc agaaaagtat ttccccatgg
420
aagagtccac ctcaattaag acagtttctt ccagaagaat ttatgaaaac acttgagaaa
480
acaggacctc agctaacctc tagaataaaa ggcgattgga ttggacttta cggcatttc
540
ctaaagtctc caaattttga tggctggttt aagaccgga ggaaggaaat gacccaaaaa
600
ttggaggcac tccatctaga agctctttgt gaagaggact tacttctctg gatccagaaa
660
cacacagaag tagaaacagt agacctgtc ttgaagctga aaaataagct gttgcaggct
720
gatcgagagc acttacctgt gaaacctgac actatggaaa agttacggac acacatagat
780
gccattatct tagcattgcc agaggacttg caaggcatac tgctcaaaac gggcatgaca
840

```

tgatatttgc caagattttc cagccaaaaa ggattatgca tcatgaagca tactgacatt
 900
 tcaaccagac gcacaaagga gatctctcag tggcagcgga gtggaaaatt gccatgaatg
 960
 ctagttagacag ggtagaaaga ctgtattgta taaacagacc tttttagtgc attacttttt
 1020
 aaagtggata tctgtggtgg ttccacttta atactgaaac accgaaaggc atttctatat
 1080
 ttttaatcat gttctaaagt gctcttatga gagacttgtg ggccatcagt attagtgtgatt
 1140
 tcatactgca gtgctggcat tgcagatatt tttttaaatt ggtgctgctt tgcccaatca
 1200
 tgttaaaact cagggggata taaaaataac attcacactg gctatcttct taagaacaga
 1260
 aagactgaac tgtcctatgg ttagaaggaa ttgatgctta tgtagtgcct tctgttgccc
 1320
 tacatgtttc acagttcagc tgctagtctt gaagcttttc cttagcttca ttatgatacy
 1380
 taattttata aggtattctg ttgagtgatc attgtttaaa aaaaaagttt cttgctaccc
 1440
 attgtgttta ttaatagaca tgatggggtt ttttcagttg tcatatagat tttcattatt
 1500
 ttcccttcac gcgt
 1514

<210> 3772

<211> 280

<212> PRT

<213> Homo sapiens

<400> 3772

Phe	Thr	Ile	His	Asp	Ser	Glu	Phe	Lys	Glu	Tyr	Thr	Thr	Arg	Thr	Gln
1			5						10					15	
Arg	Pro	Pro	Ser	Val	Ile	Leu	Gly	Val	Thr	Asn	Pro	Phe	Phe	Ala	Lys
			20					25					30		
Thr	Leu	Gln	His	Trp	Pro	His	Ile	Ile	Arg	Ile	Gly	Asp	Leu	Lys	Pro
		35				40						45			
Thr	Ser	Glu	Ile	Pro	Lys	Gln	Val	Lys	Val	Lys	Lys	Leu	Lys	Asn	Leu
	50					55					60				
Lys	Thr	Leu	Asp	Ser	Lys	Pro	Gly	Val	Tyr	Thr	Ser	Tyr	Lys	Pro	Tyr
65				70					75					80	
Leu	Asn	Arg	Asp	Glu	Glu	Ile	Ile	Lys	Gln	Leu	Gln	Lys	Gly	Val	Gln
			85					90						95	
Gln	Lys	Arg	Pro	Ser	Glu	Ala	Gln	Ser	Val	Ile	Leu	Arg	Arg	Tyr	Phe
			100					105					110		
Leu	Glu	Leu	Thr	Gln	Ser	Phe	Ile	Pro	Leu	Glu	Arg	Tyr	Val	Ala	
		115					120					125			
Ser	Leu	Met	Pro	Leu	Gln	Lys	Ser	Ile	Ser	Pro	Trp	Lys	Ser	Pro	Pro
	130					135					140				
Gln	Leu	Arg	Gln	Phe	Leu	Pro	Glu	Glu	Phe	Met	Lys	Thr	Leu	Glu	Lys
145				150						155				160	
Thr	Gly	Pro	Gln	Leu	Thr	Ser	Arg	Ile	Lys	Gly	Asp	Trp	Ile	Gly	Leu
			165						170					175	
Tyr	Arg	His	Phe	Leu	Lys	Ser	Pro	Asn	Phe	Asp	Gly	Trp	Phe	Lys	Thr

caccgacctc taaagttcct ggtctgggat tacgactcca gtgggaagca tgacttcac
1080
ggcgagttca ccagcacttt ccaggagatg caggaaggga cggcaaacc tgggcaggag
1140
atgcagtggg actgtatcaa cccaagtat cgggacaaga agaagaatta taagaactca
1200
ggagtggtag tgctggctga cctcaagttc cacaggggtg actccttcct ggactatatc
1260
atgggtggct gccagatcag cttcaccgtg gccattgact tcaccgcctc caatggggac
1320
ccgaggagca gccagtccct gcactacatc agtccccgac agcccaacca ctacctgcag
1380
gccctgcgtg cagtgggagg catctgccag gactatgaca gtgataagag gttcccagct
1440
tttggttttg gggctcgaat ccccccaac ttcgaggtgt cccatgactt tgctatcaat
1500
ttcaaccctg aggacgatga gtgtgaaggc atccagggcg tggaggaggc ctaccagaac
1560
tgctgcca gggccagct ctacggcccc accaacgtgg cgcccatcat ctccaagggt
1620
gctgaaccag ccagcgaga gcagagcacc ggccaagcca cgaagtattc agtactgctg
1680
gtgtcactg acggtgtggt gagtgatatg gcagagacc gaacagccat tgtgcgagcc
1740
tccgcctgc ccatgtcaat catcatcgtg ggtgtgggca acgtgactt ctctgacatg
1800
aggctactgg acggagatga tggccccctg cggtgcccac ggggtgagcc cgcgctccgg
1860
gacatcgtag agttcgtgcc cttccgggag ctcaagaacg catccccctgc ggcgctggcc
1920
aagtgcgtgc tggccgaggt cccgaagcag gtgggtggagt actacagcca cagaggcctg
1980
ccccgagaa gcctgggtgt ccctgccgga gaggccagcc caggctgcac accgtgaaga
2040
tgtggagggc gtaggggtggg ggcagtgagg aatgggtccg tacagcctct gtctgcaaca
2100
tgcttggggg cccttaagct cctccgacc tcccagaagc ctccagtccc caccaggccc
2160
cactcccagt cctcctggga tcctgctggc ttggggcccg ctctggggcc cccaaggccg
2220
aagggtgaca aaatacaggc ccccatgcct ggccctgcct gagccagggtg ggtggaggga
2280
gggagatcat gagggacttg gagggagctg ggagttcatc cacgggagac cctgccccga
2340
tgagaagggg cagggactgg gggctctgct ttgcgtctaa cctttgtggg ggagggccag
2400
caaggcagtc cccccacgcc cgagaaagcc tgggggacct agacacctgt cccacagtc
2460
aaagcctggg gacccagaca tcctgtcccc acagtcagcc tcctgtccct gctgggtgcc
2520
ccacaccac ctacctgtg ctttttgccg tcgggcctct gcacctgggt ccatggggtc
2580
tgcggggtct gcgggggtct cctggcctgt gggttctgcc ggtggggctt caggagtaat
2640

aaagtgtcac cctatccttg taaa
2664

<210> 3774

<211> 678

<212> PRT

<213> Homo sapiens

<400> 3774

Ala	Pro	Gly	Arg	Arg	Ser	Gly	Lys	Arg	Gly	His	Ala	Trp	Ala	Gly	His
1				5					10					15	
His	Phe	Pro	Gly	Ala	Ala	Ala	Ala	Arg	Leu	Ala	Gly	Ser	Gly	Pro	Ser
			20					25					30		
Val	Arg	Pro	Ala	Gly	Pro	Pro	Asn	Ala	Gly	Ser	Met	Ser	Ala	Gly	Ser
		35					40					45			
Glu	Arg	Gly	Ala	Ala	Ala	Thr	Pro	Gly	Gly	Leu	Pro	Ala	Pro	Cys	Ala
	50					55					60				
Ser	Lys	Val	Glu	Leu	Arg	Leu	Ser	Cys	Arg	His	Leu	Leu	Asp	Arg	Asp
65					70					75				80	
Pro	Leu	Thr	Lys	Ser	Asp	Pro	Ser	Val	Ala	Leu	Leu	Gln	Gln	Ala	Gln
				85					90					95	
Gly	Gln	Trp	Val	Gln	Val	Gly	Arg	Thr	Glu	Val	Val	Arg	Ser	Ser	Leu
			100					105					110		
His	Pro	Val	Phe	Ser	Lys	Val	Phe	Thr	Val	Asp	Tyr	Tyr	Phe	Glu	Glu
		115					120					125			
Val	Gln	Arg	Leu	Arg	Phe	Glu	Val	Tyr	Asp	Thr	His	Gly	Pro	Ser	Gly
	130					135					140				
Phe	Ser	Cys	Gln	Glu	Asp	Asp	Phe	Leu	Gly	Gly	Met	Glu	Cys	Thr	Leu
145					150					155				160	
Gly	Gln	Pro	Ala	Gln	Lys	Trp	Leu	Leu	Gln	Val	Val	Met	Arg	Val	Ser
				165					170					175	
Val	Asp	Val	Leu	Gly	Pro	Ala	Gly	His	Cys	Ala	Lys	His	Phe	Leu	Cys
			180					185					190		
Cys	Thr	Glu	Ser	Ser	His	Leu	Ala	Arg	Thr	Gly	Pro	Ser	Phe	Leu	Leu
	195						200					205			
Arg	Tyr	Asp	Asp	Leu	Cys	Leu	Pro	Trp	Ala	Thr	Ala	Gly	Ala	Val	Arg
	210					215					220				
Trp	Trp	Thr	Cys	Arg	Gly	Gly	His	Thr	Gln	Gly	Trp	Gln	Ile	Val	Ala
225					230					235				240	
Gln	Lys	Lys	Val	Thr	Arg	Pro	Leu	Leu	Leu	Lys	Phe	Gly	Arg	Asn	Ala
				245					250					255	
Gly	Lys	Ser	Thr	Ile	Thr	Val	Ile	Ala	Glu	Asp	Ile	Ser	Gly	Asn	Asn
			260					265					270		
Gly	Tyr	Val	Glu	Leu	Ser	Phe	Arg	Ala	Arg	Lys	Leu	Asp	Asp	Lys	Asp
	275						280					285			
Leu	Phe	Ser	Lys	Ser	Asp	Pro	Phe	Leu	Glu	Leu	Tyr	Arg	Val	Asn	Asp
	290					295					300				
Asp	Gln	Gly	Leu	Gln	Leu	Val	Tyr	Arg	Thr	Glu	Val	Val	Lys	Asn	Asn
305					310					315				320	
Leu	Asn	Pro	Ser	Trp	Glu	Pro	Phe	Lys	Val	Ser	Leu	Ser	Ser	Leu	Cys
				325					330					335	
Ser	Cys	Asp	Val	His	Arg	Pro	Leu	Lys	Phe	Leu	Val	Trp	Asp	Tyr	Asp
			340					345					350		
Ser	Ser	Gly	Lys	His	Asp	Phe	Ile	Gly	Glu	Phe	Thr	Ser	Thr	Phe	Gln

355	360	365
Glu Met Gln Glu Gly Thr Ala Asn Pro Gly Gln Glu Met Gln Trp Asp		
370	375	380
Cys Ile Asn Pro Lys Tyr Arg Asp Lys Lys Lys Asn Tyr Lys Asn Ser		
385	390	395
Gly Val Val Val Leu Ala Asp Leu Lys Phe His Arg Val Tyr Ser Phe		
405	410	415
Leu Asp Tyr Ile Met Gly Gly Cys Gln Ile Ser Phe Thr Val Ala Ile		
420	425	430
Asp Phe Thr Ala Ser Asn Gly Asp Pro Arg Ser Ser Gln Ser Leu His		
435	440	445
Tyr Ile Ser Pro Arg Gln Pro Asn His Tyr Leu Gln Ala Leu Arg Ala		
450	455	460
Val Gly Gly Ile Cys Gln Asp Tyr Asp Ser Asp Lys Arg Phe Pro Ala		
465	470	475
Phe Gly Phe Gly Ala Arg Ile Pro Pro Asn Phe Glu Val Ser His Asp		
485	490	495
Phe Ala Ile Asn Phe Asn Pro Glu Asp Asp Glu Cys Glu Gly Ile Gln		
500	505	510
Gly Val Val Glu Ala Tyr Gln Asn Cys Leu Pro Arg Val Gln Leu Tyr		
515	520	525
Gly Pro Thr Asn Val Ala Pro Ile Ile Ser Lys Val Ala Glu Pro Ala		
530	535	540
Gln Arg Glu Gln Ser Thr Gly Gln Ala Thr Lys Tyr Ser Val Leu Leu		
545	550	555
Val Leu Thr Asp Gly Val Val Ser Asp Met Ala Glu Thr Arg Thr Ala		
565	570	575
Ile Val Arg Ala Ser Arg Leu Pro Met Ser Ile Ile Ile Val Gly Val		
580	585	590
Gly Asn Ala Asp Phe Ser Asp Met Arg Leu Leu Asp Gly Asp Asp Gly		
595	600	605
Pro Leu Arg Cys Pro Arg Gly Glu Pro Ala Leu Arg Asp Ile Val Gln		
610	615	620
Phe Val Pro Phe Arg Glu Leu Lys Asn Ala Ser Pro Ala Ala Leu Ala		
625	630	635
Lys Cys Val Leu Ala Glu Val Pro Lys Gln Val Val Glu Tyr Tyr Ser		
645	650	655
His Arg Gly Leu Pro Pro Arg Ser Leu Gly Val Pro Ala Gly Glu Ala		
660	665	670
Ser Pro Gly Cys Thr Pro		
675		

<210> 3775

<211> 549

<212> DNA

<213> Homo sapiens

<400> 3775

gaattcgagg tcttgagaga ctgtgagagc cccaactcca ttagtattat gggcctcaat
60

acttcccggg ttgcaattac cctgaagccc caagacccta tggaacagaa cgtagctgag
120

ctgttgagcgt tcttgctggt gaaggatcag agcaagtacc ctatccggga gtctgaaatg
180

cggaatata ttgttaaaga atatcgcaac cagtttcctg agatactcag gcgagcagca
 240
 gcccacctgg agtgcatttt taggtttgaa ttgagagaac ttgaccctga ggcacacacc
 300
 tacattctgt taaacaaact gggacctgtg ccctttgaag ggtagaaga gagcccaa
 360
 gggccaaaga tgggcctcct gatgatgatt ctaggccaaa tattcctgaa tggcaacca
 420
 gccaaaggagg ctgagatttg ggaaatgctc tggaggatgg ggggtgcagcg ggaaaggagg
 480
 ctttccattt ttgggaaccc aaagagactt ctgtctgtgg agtttgtatg gcagcgttac
 540
 ttagactac
 549

<210> 3776

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3776

Glu	Phe	Glu	Val	Leu	Arg	Asp	Cys	Glu	Ser	Pro	Asn	Ser	Ile	Ser	Ile
1				5					10					15	
Met	Gly	Leu	Asn	Thr	Ser	Arg	Val	Ala	Ile	Thr	Leu	Lys	Pro	Gln	Asp
			20					25					30		
Pro	Met	Glu	Gln	Asn	Val	Ala	Glu	Leu	Leu	Gln	Phe	Leu	Leu	Val	Lys
		35					40				45				
Asp	Gln	Ser	Lys	Tyr	Pro	Ile	Arg	Glu	Ser	Glu	Met	Arg	Glu	Tyr	Ile
	50					55				60					
Val	Lys	Glu	Tyr	Arg	Asn	Gln	Phe	Pro	Glu	Ile	Leu	Arg	Arg	Ala	Ala
65					70				75					80	
Ala	His	Leu	Glu	Cys	Ile	Phe	Arg	Phe	Glu	Leu	Arg	Glu	Leu	Asp	Pro
			85					90					95		
Glu	Ala	His	Thr	Tyr	Ile	Leu	Leu	Asn	Lys	Leu	Gly	Pro	Val	Pro	Phe
			100					105					110		
Glu	Gly	Leu	Glu	Glu	Ser	Pro	Asn	Gly	Pro	Lys	Met	Gly	Leu	Leu	Met
		115					120				125				
Met	Ile	Leu	Gly	Gln	Ile	Phe	Leu	Asn	Gly	Asn	Gln	Ala	Lys	Glu	Ala
	130					135				140					
Glu	Ile	Trp	Glu	Met	Leu	Trp	Arg	Met	Gly	Val	Gln	Arg	Glu	Arg	Arg
145				150					155					160	
Leu	Ser	Ile	Phe	Gly	Asn	Pro	Lys	Arg	Leu	Leu	Ser	Val	Glu	Phe	Val
			165					170					175		
Trp	Gln	Arg	Tyr	Leu	Asp	Tyr									
			180												

<210> 3777

<211> 4915

<212> DNA

<213> Homo sapiens

<400> 3777

ngaggctaca agatcatagt tcatttaaag ccccatccc tgcaagtggg gctttctacc
 60

aatatgaatc ttttcaacct ggaccgtttt cgctttgaga aaaggaataa gattgaggaa
120
gcgcccgaag caaccctca accttcccag cctggccctt cttaccaat ttctcttagt
180
gctgaagagg agaatgctga aggggaagtt agcagggcaa acactcctga ttcagatata
240
actgaaaaaa cagaagattc tagtgttcca gaaactccag ataatgaaag aaaagcaagt
300
atatcatatt tcaaaaatca aagaggaata cagtatattg atttgtcttc tgatagttaa
360
gatgtcgttt ccccaaattg ctccaatata gttcaagaga aaacattcaa caaagataca
420
gtgattatag tttctgagcc atctgaagat gaagagtccc aaggccttcc taccatggca
480
cgtagaaatg atgatatttc agaactggaa gacctttcgg aattggaaga ccttaaagat
540
gctaaacttc agactttgaa ggaacttttt ccacaaagaa gtgacaatga tttacttaag
600
ttgattgaat caacaagcac tatggatgga gcaattgctg ctgccttgct gatgtttggt
660
gatgcaggtg gtgggccag gaaaagaaaa ttatcttctt cttcagagcc atatgaggaa
720
gatgaattta atgatgatca atctataaaa aagacaagac tggatcatgg agaggaatca
780
aatgagtctg cagaatctag cagtaattgg gaaaagcagg aaagtattgt actgaaattg
840
caaaaggaat ttcccaattt tgataaacag gaacttagag aagtactcaa ggaacatgaa
900
tggatgtaca cagaagcttt agaatctcta aaagtgtttg cagaagacca agatattgaa
960
tatgcatcac aaagtgaggt tccaaatgga aaagaagttt cttcaagaag tcaaaattac
1020
cctaaaaatg caactaaaac aaaactaaaa cagaaatttt caatgaaagc acaaaatggc
1080
tttaacaaga aacgtaaaaa aaatgttttt aatccaaaga gagttgttga agactctgaa
1140
tatgattcag gttctgatgt cggtagtcca ctagatgagg actatagtag tggatgaagaa
1200
gtgatggagg atggctataa aggtaaaatt cttcacttcc ttcaagatgc ttcaattggt
1260
gaacttactt tgattcctca gtgttctcag aaaaaggctc agaagataac agaactccgg
1320
ccctttaata gttgggaggc tctgttcaca aagatgtcca aaactaatgg cttatcagaa
1380
gatttgatat ggcactgtaa aacactgatc caagaaagag atgtagttat aaggcttatg
1440
aacaaatgtg aagacatttc aaataaattg accaaacaag ttaccatgct tactggaaat
1500
ggaggtggat ggaacataga acaacttcc attctaaacc agagtttgct actcaagccc
1560
tatcagaagg ttggtttgaa ttggctggca ttggtacata aacatggact taatggcatt
1620
ttggcagatg aaatgggcct aggaaaaact attcaagcca ttgcatttct ggcatacctc
1680

tatcaggagg gtaataatgg tcctcatttg atcgttggtc cagcttcaac tatagataac
1740
tgggttaaggg aagttaattt atggtgccct actttgaagg tcctctgtta ctatggttct
1800
caagaagaac gtaaacaaat tagattttaac attcatagta gatatgaaga ttacaatgta
1860
attgtgacca catataactg tgcgatcagc agttctgatg atcgtagtct gtttcgacgg
1920
ctgaaactta attacgcaat ttttgatgag ggccatatgc tgaagaatat gggctccatt
1980
cgctaccagc accttatgac aattaatgca aataaccgtt tgctgctcac aggcacacct
2040
gtacagaaca atctgttaga actcatgtcg ctgttgaatt ttgttatgcc acacatgttt
2100
agtagtagca ccagtgaat acgaagaatg ttttcctcta agacaaaatc agcagatgag
2160
caaagcatat atgaaaagga gagaatagca catgcaaac aaattataaa gccatttatt
2220
ctcagaagag taaaagaaga ggttctcaag cagttacccc ccaagaaaga tcgaattgag
2280
ttgtgtgcaa tgtcggagag gcaggagcaa ctctatttgg gtcttttcaa cagattgaaa
2340
aaatctatca ataacttggc cacagaaaaa aacacagaaa tgtgcaatgt catgatgcag
2400
ttgaggaaaa tggccaatca tcctttatta catcgccaat attacacagc tgaaaaactc
2460
aaggaaatgt ctcagcttat gctaaaggaa cctacacatt gtgaggctaa ccctgacctg
2520
atctttgaag atatggaagt tatgacagac ttcgaactac atgtactttg taaacagtac
2580
cgacacatta ataactttca gttagacatg gacttgattt tagattctgg aaaatttcga
2640
gttttaggat gcatcttgtc tgaattgaaa cagaaggggtg atagagttgt gttatttagc
2700
caatttacca tgatgctgga tatcttagag gttctattaa aacatcatca gcataggtac
2760
ctcagattag atggaaagac tcagatttct gaaaggattc atctaattga tgagttaa
2820
accgatatgg atatctttgt gtttctgcta tcaacaaaag ctggtggatt aggaataaat
2880
ctgacttcag caaatgttgt tatacttcac gatattgact gtaatcctta taatgacaaa
2940
caagcagaag atagatgcca tagagtaggc cagactaaag aagtactagt tataaaacta
3000
ataagccaag ggacgattga agaattccatg ctaaaaatta accaacagaa attgaaacta
3060
gaacaggata tgactacagt agatgaaggt gatgaaggga gtatgccagc agatatagcc
3120
acattactaa aaacatcaat gggcctgtga aataagaact gtgaactctc aattgatgag
3180
gaaatatcaa cttggtgcac tcaaggacat ttacattatg atgacctgg ggtttatgaa
3240
catttataac tttttataat ttccatatta catttctcat agtatggaca actttttgcc
3300

actaactgaa ttctccaaat actcacacgt gaaatttcaa aaaagaagcc acaaatatgt
3360
agttctgaag atgttgaata atcattttac aaagcagttt tctgaatggg gattagttgg
3420
tgattgtttg taacaaatat gctaattgctt tagaaatgtc agtatttttg taattatttc
3480
tacctccaaa tatatatata ttgtctttca ctggataatg tgtgtagatt tttacatgtg
3540
ccttatttga caatgcttat gtcttgtttt tgcttgtctc atttgaagtt cttttttatt
3600
atgttaaaga atgcagctgt atagattata tagctttcat tttattgcta tttgaagcag
3660
atgttcacca atgtcagcaa gaactcaacc tgaatttaaa ggtggcattc catatactaa
3720
catccccag gtctctctca gtacttctgc tgaacaaaat ttatttggct aggcactaag
3780
ttgttttcca gtgaatagta actaaagaag cccctacctt gctccatgga ttaattcctt
3840
ctgttcattt tccaactgca ctaattgtgc atattactct gcctaactct gtgcatgttt
3900
tcattgattt cccctctccg gcttttgcct ctcttgaaac tgttgcccag tcacttctgc
3960
tccaattctc ttctctctca aatagtagtt tattactgcc acatctccat gcatcagcaa
4020
aatgttggtg acatttttct agcctggcag aacagattac ttaaagctat ttcatttcaa
4080
agcagactga atgtgacttc atctaaaggc agcattaggt actgcatgga aataggtcat
4140
taacttgaaa ctcttatcaa aatatatttt accagtttcc agaatttcca gtacaggacc
4200
gcctgaagag agagccattg ttcaattcca attcagtggt agtgacaaag tgaatttag
4260
aagtgaagtt gtctatttga tatttaactc tttattaaat ctttctttta atttctgcct
4320
gtcagtctat attgctgttt ttattataca tcagtttctt tgtataactt gtgagttcca
4380
tgtgttttgt ttttattatg taaatatcat tataaataaa cttatttata aatcaaagat
4440
ttgttaattt ttggaaatca tgcttttcaa agcatcctaa cttgctaaga tgctaggtag
4500
tacgacctc tggatttgga aggcaaataa aactcttaca gtgattattt agatattaaa
4560
gactgagaac tcacggctta accccagtct tgatgggtata ttgaacagac tgaatatatt
4620
ttaccattac agggctaaaa ggagtcttca tgtgttaata ctacctcctt gtacatcact
4680
atacccaa at cagttattca aattgttagg aattttacct tttaaaatct cataatggat
4740
atctcatgtt ttctgtatta atgtattttc aatgataggc tgtttctttt tttgttggtta
4800
ttgttggtgt tgttatatcc atacttttat ctctaataaa atgtagttgg gttcttctg
4860
taatgcgcta ttatgtcttg ggcttaataa aaatatattgt gatcataaaa aaaaa
4915

<210> 3778

<211> 1049

<212> PRT

<213> Homo sapiens

<400> 3778

```

Xaa Gly Tyr Lys Ile Ile Val His Leu Lys Pro Pro Ser Leu Gln Val
 1           5           10           15
Val Leu Ser Thr Asn Met Asn Leu Phe Asn Leu Asp Arg Phe Arg Phe
          20          25          30
Glu Lys Arg Asn Lys Ile Glu Glu Ala Pro Glu Ala Thr Pro Gln Pro
          35          40          45
Ser Gln Pro Gly Pro Ser Ser Pro Ile Ser Leu Ser Ala Glu Glu Glu
          50          55          60
Asn Ala Glu Glu Val Ser Arg Ala Asn Thr Pro Asp Ser Asp Ile
65          70          75          80
Thr Glu Lys Thr Glu Asp Ser Ser Val Pro Glu Thr Pro Asp Asn Glu
          85          90          95
Arg Lys Ala Ser Ile Ser Tyr Phe Lys Asn Gln Arg Gly Ile Gln Tyr
          100         105         110
Ile Asp Leu Ser Ser Asp Ser Glu Asp Val Val Ser Pro Asn Cys Ser
          115         120         125
Asn Thr Val Gln Glu Lys Thr Phe Asn Lys Asp Thr Val Ile Ile Val
          130         135         140
Ser Glu Pro Ser Glu Asp Glu Glu Ser Gln Gly Leu Pro Thr Met Ala
145          150         155         160
Arg Arg Asn Asp Asp Ile Ser Glu Leu Glu Asp Leu Ser Glu Leu Glu
          165         170         175
Asp Leu Lys Asp Ala Lys Leu Gln Thr Leu Lys Glu Leu Phe Pro Gln
          180         185         190
Arg Ser Asp Asn Asp Leu Leu Lys Leu Ile Glu Ser Thr Ser Thr Met
          195         200         205
Asp Gly Ala Ile Ala Ala Ala Leu Leu Met Phe Gly Asp Ala Gly Gly
          210         215         220
Gly Pro Arg Lys Arg Lys Leu Ser Ser Ser Ser Glu Pro Tyr Glu Glu
225          230         235         240
Asp Glu Phe Asn Asp Asp Gln Ser Ile Lys Lys Thr Arg Leu Asp His
          245         250         255
Gly Glu Glu Ser Asn Glu Ser Ala Glu Ser Ser Ser Asn Trp Glu Lys
          260         265         270
Gln Glu Ser Ile Val Leu Lys Leu Gln Lys Glu Phe Pro Asn Phe Asp
          275         280         285
Lys Gln Glu Leu Arg Glu Val Leu Lys Glu His Glu Trp Met Tyr Thr
          290         295         300
Glu Ala Leu Glu Ser Leu Lys Val Phe Ala Glu Asp Gln Asp Met Gln
305          310         315         320
Tyr Ala Ser Gln Ser Glu Val Pro Asn Gly Lys Glu Val Ser Ser Arg
          325         330         335
Ser Gln Asn Tyr Pro Lys Asn Ala Thr Lys Thr Lys Leu Lys Gln Lys
          340         345         350
Phe Ser Met Lys Ala Gln Asn Gly Phe Asn Lys Lys Arg Lys Lys Asn
          355         360         365
Val Phe Asn Pro Lys Arg Val Val Glu Asp Ser Glu Tyr Asp Ser Gly

```

370	375	380			
Ser Asp Val Gly Ser Ser Leu Asp Glu Asp Tyr Ser Ser Gly Glu Glu					
385	390	395	400		
Val Met Glu Asp Gly Tyr Lys Gly Lys Ile Leu His Phe Leu Gln Asp					
	405	410	415		
Ala Ser Ile Gly Glu Leu Thr Leu Ile Pro Gln Cys Ser Gln Lys Lys					
	420	425	430		
Ala Gln Lys Ile Thr Glu Leu Arg Pro Phe Asn Ser Trp Glu Ala Leu					
	435	440	445		
Phe Thr Lys Met Ser Lys Thr Asn Gly Leu Ser Glu Asp Leu Ile Trp					
	450	455	460		
His Cys Lys Thr Leu Ile Gln Glu Arg Asp Val Val Ile Arg Leu Met					
465	470	475	480		
Asn Lys Cys Glu Asp Ile Ser Asn Lys Leu Thr Lys Gln Val Thr Met					
	485	490	495		
Leu Thr Gly Asn Gly Gly Gly Trp Asn Ile Glu Gln Pro Ser Ile Leu					
	500	505	510		
Asn Gln Ser Leu Ser Leu Lys Pro Tyr Gln Lys Val Gly Leu Asn Trp					
	515	520	525		
Leu Ala Leu Val His Lys His Gly Leu Asn Gly Ile Leu Ala Asp Glu					
	530	535	540		
Met Gly Leu Gly Lys Thr Ile Gln Ala Ile Ala Phe Leu Ala Tyr Leu					
545	550	555	560		
Tyr Gln Glu Gly Asn Asn Gly Pro His Leu Ile Val Val Pro Ala Ser					
	565	570	575		
Thr Ile Asp Asn Trp Leu Arg Glu Val Asn Leu Trp Cys Pro Thr Leu					
	580	585	590		
Lys Val Leu Cys Tyr Tyr Gly Ser Gln Glu Glu Arg Lys Gln Ile Arg					
	595	600	605		
Phe Asn Ile His Ser Arg Tyr Glu Asp Tyr Asn Val Ile Val Thr Thr					
	610	615	620		
Tyr Asn Cys Ala Ile Ser Ser Ser Asp Asp Arg Ser Leu Phe Arg Arg					
625	630	635	640		
Leu Lys Leu Asn Tyr Ala Ile Phe Asp Glu Gly His Met Leu Lys Asn					
	645	650	655		
Met Gly Ser Ile Arg Tyr Gln His Leu Met Thr Ile Asn Ala Asn Asn					
	660	665	670		
Arg Leu Leu Leu Thr Gly Thr Pro Val Gln Asn Asn Leu Leu Glu Leu					
	675	680	685		
Met Ser Leu Leu Asn Phe Val Met Pro His Met Phe Ser Ser Ser Thr					
	690	695	700		
Ser Glu Ile Arg Arg Met Phe Ser Ser Lys Thr Lys Ser Ala Asp Glu					
705	710	715	720		
Gln Ser Ile Tyr Glu Lys Glu Arg Ile Ala His Ala Lys Gln Ile Ile					
	725	730	735		
Lys Pro Phe Ile Leu Arg Arg Val Lys Glu Glu Val Leu Lys Gln Leu					
	740	745	750		
Pro Pro Lys Lys Asp Arg Ile Glu Leu Cys Ala Met Ser Glu Arg Gln					
	755	760	765		
Glu Gln Leu Tyr Leu Gly Leu Phe Asn Arg Leu Lys Lys Ser Ile Asn					
	770	775	780		
Asn Leu Val Thr Glu Lys Asn Thr Glu Met Cys Asn Val Met Met Gln					
785	790	795	800		
Leu Arg Lys Met Ala Asn His Pro Leu Leu His Arg Gln Tyr Tyr Thr					

				805					810					815			
Ala	Glu	Lys	Leu	Lys	Glu	Met	Ser	Gln	Leu	Met	Leu	Lys	Glu	Pro	Thr		
			820					825					830				
His	Cys	Glu	Ala	Asn	Pro	Asp	Leu	Ile	Phe	Glu	Asp	Met	Glu	Val	Met		
		835					840					845					
Thr	Asp	Phe	Glu	Leu	His	Val	Leu	Cys	Lys	Gln	Tyr	Arg	His	Ile	Asn		
	850					855					860						
Asn	Phe	Gln	Leu	Asp	Met	Asp	Leu	Ile	Leu	Asp	Ser	Gly	Lys	Phe	Arg		
865				870					875					880			
Val	Leu	Gly	Cys	Ile	Leu	Ser	Glu	Leu	Lys	Gln	Lys	Gly	Asp	Arg	Val		
			885					890						895			
Val	Leu	Phe	Ser	Gln	Phe	Thr	Met	Met	Leu	Asp	Ile	Leu	Glu	Val	Leu		
		900					905						910				
Leu	Lys	His	His	Gln	His	Arg	Tyr	Leu	Arg	Leu	Asp	Gly	Lys	Thr	Gln		
	915						920					925					
Ile	Ser	Glu	Arg	Ile	His	Leu	Ile	Asp	Glu	Phe	Asn	Thr	Asp	Met	Asp		
	930					935					940						
Ile	Phe	Val	Phe	Leu	Leu	Ser	Thr	Lys	Ala	Gly	Gly	Leu	Gly	Ile	Asn		
945				950					955					960			
Leu	Thr	Ser	Ala	Asn	Val	Val	Ile	Leu	His	Asp	Ile	Asp	Cys	Asn	Pro		
			965					970						975			
Tyr	Asn	Asp	Lys	Gln	Ala	Glu	Asp	Arg	Cys	His	Arg	Val	Gly	Gln	Thr		
	980						985						990				
Lys	Glu	Val	Leu	Val	Ile	Lys	Leu	Ile	Ser	Gln	Gly	Thr	Ile	Glu	Glu		
	995					1000						1005					
Ser	Met	Leu	Lys	Ile	Asn	Gln	Gln	Lys	Leu	Lys	Leu	Glu	Gln	Asp	Met		
	1010				1015				1020								
Thr	Thr	Val	Asp	Glu	Gly	Asp	Glu	Gly	Ser	Met	Pro	Ala	Asp	Ile	Ala		
1025				1030					1035					1040			
Thr	Leu	Leu	Lys	Thr	Ser	Met	Gly	Leu									
				1045													

<210> 3779

<211> 1853

<212> DNA

<213> Homo sapiens

<400> 3779

catagggaaa aggaagacat aaaaatcact aaggaaagaa ctccagaaag tgaagaagaa

60

aatgtagaat gggaaactaa tagagatgat tctgacaatg gagatattaa ttatgattat

120

gttcatgaat tgtcattgga aatgaagcgt cagaagatac agagggaatt aatgaagctg

180

gaacaagaaa acatggagaa gagagaagaa attatcatta aaaaggaggt ttcaccagaa

240

gtggttagat caaaattgtc cccgtcacct tctctaagaa agtctagcaa atctccgaag

300

cgaaaatcaa gcccgaagtc gtcttcagct agcaagaaag ataggaagac atctgcagta

360

tcttctcccc tgttggaacca gcagagaaat tcaaaaacca accaaagtaa aaagaaagga

420

ccacgtactc ctagtccacc cctcctata ccagaagata tcgctctggg gaaaaaatac

480

aaagaaaaat ataaagtaaa agacaggata gaagaaaaaa caagagatgg aaaggacaga
540
ggacgagatt ttgaacgaca aagagaaaag agagacaagc caaggtctac ttccccagca
600
ggacagcatc atttctctat atcttctaga catcactcat cttcctcaca atcaggatca
660
tctattcaaa gacattctcc ttctcctcgt cgaaaaagaa ctcttccacc atcttatcag
720
cggacactaa ctccaccttt acgacgctct gcctctcctt atccttcaca ttctttgtcg
780
tctccccaga gaaagcagag tcctccaaga catcgctctc caatgcgaga gaaagggaga
840
catgatcatg aacgaacttc acagtctcat gatcgacgcc acgaagggag ggaagatact
900
aggggcaaac gagacagaga aaaggactca agagaagaac gagaatatga acaggatcag
960
agctcttcta gagaccacag agatgacaga gaacctcgag atggtcggga tcggagagat
1020
gccagagata ctagggaccg aagggaacta agagactcca gagacatgcg ggactcaagg
1080
gagatgagag attatagcag agataccaaa gagagccgtg atcccagaga ttctcgggcc
1140
actcgtgatg cccatgacta cagggaacct gaaggctcgag atactcatcg aaaggaggat
1200
acatatccag aagaatcccc gagttatggc cgaaaccatt tgagagaaga aagttctcgt
1260
acggaaataa ggaatgagtc cagaaatgag tctcgaagtg aaattagaaa tgaccgaatg
1320
ggccgaagta gggggagggt tcctgagtta cctgaaaagg gaagtcgagg ctcaagagg
1380
tctcaaattg atagtacag tagtaatagc aactatcatg acagctggga aactcgaagt
1440
agctatcctg aaagagatag atatcctgaa agagacaaca gagatcaagc aagggattct
1500
tcctttgaga gaagacatgg agagcgagac cgctcgtgacc agagagagag atcaaagacc
1560
aagctcacca attcgacatc agggaaggaa tgacgagctt gagcgtgatg aaagaagaga
1620
ggaacgaaga gtagacaggt ccattcaaga tctgggtcat ttgatagcag agacaggctt
1680
caagaacgag atcgatatga acacgacaga gagcgcgagn nagagaggag agatacgagg
1740
cagagagaat gggaccgaga tgctgataaa gattggccac gcaacagggg tcgagataga
1800
ttgcgagaac gagaacgaga gagagaacga gacaaaagga gagacttggc tcg
1853

<210> 3780

<211> 530

<212> PRT

<213> Homo sapiens

<400> 3780

His Arg Glu Lys Glu Asp Ile Lys Ile Thr Lys Glu Arg Thr Pro Glu

1	5	10	15
Ser Glu Glu Glu Asn Val Glu Trp Glu Thr Asn Arg Asp Asp Ser Asp			
	20	25	30
Asn Gly Asp Ile Asn Tyr Asp Tyr Val His Glu Leu Ser Leu Glu Met			
	35	40	45
Lys Arg Gln Lys Ile Gln Arg Glu Leu Met Lys Leu Glu Gln Glu Asn			
	50	55	60
Met Glu Lys Arg Glu Glu Ile Ile Ile Lys Lys Glu Val Ser Pro Glu			
65	70	75	80
Val Val Arg Ser Lys Leu Ser Pro Ser Pro Ser Leu Arg Lys Ser Ser			
	85	90	95
Lys Ser Pro Lys Arg Lys Ser Ser Pro Lys Ser Ser Ser Ala Ser Lys			
	100	105	110
Lys Asp Arg Lys Thr Ser Ala Val Ser Ser Pro Leu Leu Asp Gln Gln			
	115	120	125
Arg Asn Ser Lys Thr Asn Gln Ser Lys Lys Lys Gly Pro Arg Thr Pro			
	130	135	140
Ser Pro Pro Pro Pro Ile Pro Glu Asp Ile Ala Leu Gly Lys Lys Tyr			
145	150	155	160
Lys Glu Lys Tyr Lys Val Lys Asp Arg Ile Glu Glu Lys Thr Arg Asp			
	165	170	175
Gly Lys Asp Arg Gly Arg Asp Phe Glu Arg Gln Arg Glu Lys Arg Asp			
	180	185	190
Lys Pro Arg Ser Thr Ser Pro Ala Gly Gln His His Ser Pro Ile Ser			
	195	200	205
Ser Arg His His Ser Ser Ser Ser Gln Ser Gly Ser Ser Ile Gln Arg			
	210	215	220
His Ser Pro Ser Pro Arg Arg Lys Arg Thr Pro Ser Pro Ser Tyr Gln			
225	230	235	240
Arg Thr Leu Thr Pro Pro Leu Arg Arg Ser Ala Ser Pro Tyr Pro Ser			
	245	250	255
His Ser Leu Ser Ser Pro Gln Arg Lys Gln Ser Pro Pro Arg His Arg			
	260	265	270
Ser Pro Met Arg Glu Lys Gly Arg His Asp His Glu Arg Thr Ser Gln			
	275	280	285
Ser His Asp Arg Arg His Glu Gly Arg Glu Asp Thr Arg Gly Lys Arg			
	290	295	300
Asp Arg Glu Lys Asp Ser Arg Glu Glu Arg Glu Tyr Glu Gln Asp Gln			
305	310	315	320
Ser Ser Ser Arg Asp His Arg Asp Asp Arg Glu Pro Arg Asp Gly Arg			
	325	330	335
Asp Arg Arg Asp Ala Arg Asp Thr Arg Asp Arg Arg Glu Leu Arg Asp			
	340	345	350
Ser Arg Asp Met Arg Asp Ser Arg Glu Met Arg Asp Tyr Ser Arg Asp			
	355	360	365
Thr Lys Glu Ser Arg Asp Pro Arg Asp Ser Arg Ser Thr Arg Asp Ala			
	370	375	380
His Asp Tyr Arg Asp Arg Glu Gly Arg Asp Thr His Arg Lys Glu Asp			
385	390	395	400
Thr Tyr Pro Glu Glu Ser Arg Ser Tyr Gly Arg Asn His Leu Arg Glu			
	405	410	415
Glu Ser Ser Arg Thr Glu Ile Arg Asn Glu Ser Arg Asn Glu Ser Arg			
	420	425	430
Ser Glu Ile Arg Asn Asp Arg Met Gly Arg Ser Arg Gly Arg Val Pro			

ggacaaactc gtgtgggtta aagtcactgt gagagctgga gttgagtctg cctacggggg
 1080
 aggactgcgg cacctacctc gcagggtgtg tgtgaggagc aatgtaaccg tgattttgaa
 1140
 ctgtgattct ggaagggcgg tgtgctgtc cccgggggtg tgccagggga gtgaggagaa
 1200
 aaggccaggg agacagctc actcaggcag ctgagtggga gagcatttat ctctaaacct
 1260
 ggaggggtat atggtgggac aggaggaatt tgggcaggaa ctttcatgct aggggtttgg
 1320
 gggactcgct ggacaatgcc cctggacccc ccgggggtac gcgt
 1364

<210> 3782

<211> 112

<212> PRT

<213> Homo sapiens

<400> 3782

Met	Asn	Asp	Ile	Gln	Asn	Ser	Arg	Leu	Asn	Pro	Gln	Asp	Leu	Cys	Leu
1				5					10					15	
Thr	Pro	Asp	Pro	Gly	Ser	Arg	Asn	Ser	Gly	Ser	Ser	His	Leu	Val	Trp
			20					25					30		
Asp	Leu	Gln	Asp	Ser	Ser	Glu	Leu	His	Pro	Glu	Phe	Ala	Lys	Cys	His
		35					40					45			
Val	Pro	Trp	Thr	Pro	Arg	Phe	Ala	Tyr	Gly	Val	Phe	Tyr	Ala	Asp	Pro
	50					55				60					
Cys	Thr	Gly	Gly	Asp	Ser	Tyr	His	Pro	His	Glu	Gln	Ser	Ser	Pro	Pro
65					70					75				80	
Ile	Phe	Ser	Lys	Gln	Ser	Trp	Ala	Leu	Thr	Pro	Leu	Glu	Arg	Gly	Arg
				85					90					95	
Asn	Gly	Ser	Lys	Ile	Thr	Ser	Arg	Lys	Gly	Gln	Ser	Val	Leu	Met	Thr
			100					105					110		

<210> 3783

<211> 4137

<212> DNA

<213> Homo sapiens

<400> 3783

nncaaggcgc ctgcgactcg gtcccaggtc ggccggcgcc gcgcggcgccg ctcgcgcggg
 60
 ggccccggcg cgccggcgcc cgcagtagcg agcgcgcgga cccacgccac ggccaggagc
 120
 ccagagcagc gcggccacac tgcccagggg tcggccctcg gccccggcgc tcggagcgcg
 180
 gcggctgcct gggctttaat ggctgctccg cggagcagcg cctagggctg gaaggcggct
 240
 gcggctcagg aagtcacccg agcaagctc cttcggggcc ggccgcaccc gccgcggcgc
 300
 gctccatggg ggcgcgctcc ccccgggcgg cccgctgacc cgggacgccg gggcccgctc
 360
 gctcgccggc cgcgcgctcc ggccatgaac tgagcccgcg ggccagcccc gcgcctgctc
 420

cgcccgcgcc tttcttctcg cgcctcctcc gcccgcgcc ggcgggcccg gctccccggg
480
ggctgcgggc ccccgggctc ggcgggccgc gggccccggg gcgcggggcg gcggcgggcg
540
ggggcgcgcg gctccgggcg cggcgctgc accatgaact accagcagca gctggccaac
600
tcggctgcc tccgggccga gatccagcgc ttcgagtcgg tccaccccaa catctactcc
660
atctacgagc tgctggagcg cgtggaggag ccggtgctgc agaaccagat ccgggagcac
720
gtcatcgcca tcgaagatgc cttcgtgaac agccaggaat ggacgctgag tcgatctgtc
780
ccggagctca aagtgggaat tgtgggtaac ttggccagcg gcaagtctgc cctgggtgcac
840
cgggtacctga cgggcacata tgtccaggag gagtctccgg aagggtggcag gttcaagaaa
900
gagattgtcg ttgatggaca gagctatctg ctgctgatca gagatgaagg gggccccccg
960
gaggcgagc ttgcatgtg ggtggacgct gttatatattg tcttcagctt ggaggatgaa
1020
ataagtttcc agaccgttta ccactactac agtcgaatgg ccaactatcg gaacacgagc
1080
gagattcctc tggttctggt gggaaccag gatgccataa gttctgctaa cccgagggtc
1140
atcgatgacg ccagggcgag gaagctctcc aacgacctga aacggtgcac gtactacgag
1200
acgtgtgcta catacgggct gaatgtggag aggtcttcc aggacgttgc ccagaagatt
1260
gttgccacaa ggaagaagca gcagctgtcc ataggaccct gcaagtcgct acctaattct
1320
cccagccatt cctcgtctg ttccgcgag gtgtctgccg tgcacatcag ccagacaagt
1380
aatggaggtg ggagtttaag cgactattcc tcctccgttc catcgactcc cagcaccagc
1440
cagaaggaac ttcgatcg tgttctccc actgccaaaca cggccacgcc cgttcgcaag
1500
cagtctaagc gccggtccaa cctgttcacc tctcgaaag ggagcgaccc agacaaagag
1560
aagaaaggcc tggagagtcg tgcggacagc attgggagcg gccgagccat cccaattaaa
1620
cagggcagtc tgttgaagcg aagtggcaaa tcgttgaata aagagtggaa aaagaaatat
1680
gtcaccctgt gtgacaatgg cgtgctgacc tatcatccca gtttacatga ttacatgcag
1740
aatgttcatg gtaaggagat tgaccttctg agaaccactg tgaaagtccc agggaagagg
1800
ccaccccgag ccacgtcagc ctgcgcaccc atctccagcc ctaaaaccaa tggcctatcc
1860
aaggacatga gcagtttaca catctcacc aattcagaca cagggtggg tgactccgta
1920
tgctccagcc ccagtatctc cagcaccacc agccccaagc tcgacccgcc cccctcccct
1980
cacgccaaca gaaagaagca ccgaaggaag aaaagcacta gcaacttcaa agccgacggc
2040

ctgtccggca ctgctgaaga acaagaagaa aattttgagt ttatcattgt gtcctcact
2100
ggccaaacat ggcactttga agccacgacg tatgaggagc gggacgcctg ggtccaagcc
2160
atcgagagcc agatcctggc cagcctgcag tctgtcgaga gcagcaagaa caagtcccgg
2220
ctgacgagcc agagcgaggc catggccctg cagtcgatcc ggaacatgcg cgggaaactcc
2280
cactgtgtgg actgcgagac ccagaatccc aactggggcca gtttgaactt gggagccctc
2340
atgtgcatcg aatgctcagg gatccaccgg aatcttggca cccaccttcc cagagtccga
2400
tctctggacc tggatgactg gccaatcgag ctcatcaagg tgatgtcatc catcgggaac
2460
gagctagcca acagcgtctg ggaagagagc agccaggggc ggacgaaacc atcggtagac
2520
tccacaaggg aagagaagga acggtggatc cgtgccaaagt acgagcagaa gctcttcctg
2580
gccccgctgc cctgcacgga gctgtccctg ggccagcacc tgctgcgggc caccgccgac
2640
gaggacctgc ggacggccat cctgctgctg gcacacggct cccgggacga ggtgaacgag
2700
acctgcgggg agggagacgg ccgcacggcg ctgcatctgg cctgccgcaa ggggaatgtg
2760
gtcctggcgc agctcctgat ctggtacgga gtggacgtca cggcccgaga tgcccacggg
2820
aacacagctc tggcctacgc ccggcaggcc tccagccagg agtgcatcga cgtgctgctg
2880
cagtacggct gcccgcagca gcgcttcgtg ctcatggcca cccctaacct gtccaggaga
2940
aacaataacc ggaacaacag cagtgggagg gtgcccacca tcatctgagg aacagccgtg
3000
ccgcctgct cgcgcacct gggacgcggc agcctcgccg cattctcgtc cagaagtgc
3060
agcagtgag tcccgctgca tcccctccct ctctctggtg gccacctccc tcccgccac
3120
ccactctcac cccaaacaaa atcacaaaac ctggacatcc ctcaaggggc gaagaggcgg
3180
ccgggagact gcagaagtgg ctccctttca taaactcccc taaaccacac acaggagaga
3240
gcgacggggc tcggcccttt gatgatagca catggcgag gacccttgct ctggtggcac
3300
aagggatggg gacgcgaggg ggaggggagg cgaggaacaa ggagaagggg caactttcct
3360
taactggcag ttgagcacat agtacatttc ccctctacca aacggaacac ttggattcca
3420
tctcttctct gaggagctcg acggcataaa tcagaagcaa gcacagagtt tgtcaggttt
3480
gaagccccta tgatggtgtg tgtcaaatca gttgtagcta atctgtccag ggagaatact
3540
ggcttcatta cacttgtaga gccgagttct tcccgcatta ctgctgttta atagaacgtg
3600
attagtcac gccgagaaga aagcatatta gccgaggagg tagtcacgcg gcacgcgcg
3660

gtgattgcc a cgatgtgatt gcaatactct tagaagcacc atattatccc agacatgttc
 3720
 tttcaagccc ttggagccct ctctaaattc actgtcatca tttagtatct gtttaatttt
 3780
 tcagtccaaa gagaggaaat cagtcgctga gtattatttg actccggtct ccttggtgca
 3840
 aaaacaaaat gggaaaaata aataagaata actcagaaac tcaaaaggaa accacaaaatt
 3900
 cagctaataa tagcatttcg agtatatttc gtaaactaag gaaatacaca aaaggctgtt
 3960
 ttttccgact gtaagagata tttgatgtcc ttttgccgag gtggatgtgt tagtctcagg
 4020
 ccctcctgga ccacgttgcc caagtcacac aggtctctgt gttatgtatt tagataagat
 4080
 gtgtgaaaat atatttgaat aaaagaagtt cataaaaaaaaa aaaaaaaaaa aaaaaaa
 4137

<210> 3784

<211> 804

<212> PRT

<213> Homo sapiens

<400> 3784

Met	Asn	Tyr	Gln	Gln	Gln	Leu	Ala	Asn	Ser	Ala	Ala	Ile	Arg	Ala	Glu
1				5					10					15	
Ile	Gln	Arg	Phe	Glu	Ser	Val	His	Pro	Asn	Ile	Tyr	Ser	Ile	Tyr	Glu
			20					25					30		
Leu	Leu	Glu	Arg	Val	Glu	Glu	Pro	Val	Leu	Gln	Asn	Gln	Ile	Arg	Glu
		35					40					45			
His	Val	Ile	Ala	Ile	Glu	Asp	Ala	Phe	Val	Asn	Ser	Gln	Glu	Trp	Thr
	50					55				60					
Leu	Ser	Arg	Ser	Val	Pro	Glu	Leu	Lys	Val	Gly	Ile	Val	Gly	Asn	Leu
65					70					75				80	
Ala	Ser	Gly	Lys	Ser	Ala	Leu	Val	His	Arg	Tyr	Leu	Thr	Gly	Thr	Tyr
			85						90					95	
Val	Gln	Glu	Glu	Ser	Pro	Glu	Gly	Gly	Arg	Phe	Lys	Lys	Glu	Ile	Val
			100					105					110		
Val	Asp	Gly	Gln	Ser	Tyr	Leu	Leu	Leu	Ile	Arg	Asp	Glu	Gly	Gly	Pro
	115						120					125			
Pro	Glu	Ala	Gln	Phe	Ala	Met	Trp	Val	Asp	Ala	Val	Ile	Phe	Val	Phe
	130					135					140				
Ser	Leu	Glu	Asp	Glu	Ile	Ser	Phe	Gln	Thr	Val	Tyr	His	Tyr	Tyr	Ser
145					150					155				160	
Arg	Met	Ala	Asn	Tyr	Arg	Asn	Thr	Ser	Glu	Ile	Pro	Leu	Val	Leu	Val
			165						170					175	
Gly	Thr	Gln	Asp	Ala	Ile	Ser	Ser	Ala	Asn	Pro	Arg	Val	Ile	Asp	Asp
		180						185					190		
Ala	Arg	Ala	Arg	Lys	Leu	Ser	Asn	Asp	Leu	Lys	Arg	Cys	Thr	Tyr	Tyr
		195					200					205			
Glu	Thr	Cys	Ala	Thr	Tyr	Gly	Leu	Asn	Val	Glu	Arg	Val	Phe	Gln	Asp
	210					215					220				
Val	Ala	Gln	Lys	Ile	Val	Ala	Thr	Arg	Lys	Lys	Gln	Gln	Leu	Ser	Ile
225					230					235				240	
Gly	Pro	Cys	Lys	Ser	Leu	Pro	Asn	Ser	Pro	Ser	His	Ser	Ser	Val	Cys

				245				250				255				
Ser	Ala	Gln	Val	Ser	Ala	Val	His	Ile	Ser	Gln	Thr	Ser	Asn	Gly	Gly	
260				265				270								
Gly	Ser	Leu	Ser	Asp	Tyr	Ser	Ser	Ser	Val	Pro	Ser	Thr	Pro	Ser	Thr	
275				280				285								
Ser	Gln	Lys	Glu	Leu	Arg	Ile	Asp	Val	Pro	Pro	Thr	Ala	Asn	Thr	Pro	
290				295				300								
Thr	Pro	Val	Arg	Lys	Gln	Ser	Lys	Arg	Arg	Ser	Asn	Leu	Phe	Thr	Ser	
305					310				315				320			
Arg	Lys	Gly	Ser	Asp	Pro	Asp	Lys	Glu	Lys	Lys	Gly	Leu	Glu	Ser	Arg	
325				330				335								
Ala	Asp	Ser	Ile	Gly	Ser	Gly	Arg	Ala	Ile	Pro	Ile	Lys	Gln	Gly	Met	
340				345				350								
Leu	Leu	Lys	Arg	Ser	Gly	Lys	Ser	Leu	Asn	Lys	Glu	Trp	Lys	Lys	Lys	
355				360				365								
Tyr	Val	Thr	Leu	Cys	Asp	Asn	Gly	Val	Leu	Thr	Tyr	His	Pro	Ser	Leu	
370				375				380								
His	Asp	Tyr	Met	Gln	Asn	Val	His	Gly	Lys	Glu	Ile	Asp	Leu	Leu	Arg	
385					390				395				400			
Thr	Thr	Val	Lys	Val	Pro	Gly	Lys	Arg	Pro	Pro	Arg	Ala	Thr	Ser	Ala	
405				410				415								
Cys	Ala	Pro	Ile	Ser	Ser	Pro	Lys	Thr	Asn	Gly	Leu	Ser	Lys	Asp	Met	
420				425				430								
Ser	Ser	Leu	His	Ile	Ser	Pro	Asn	Ser	Asp	Thr	Gly	Leu	Gly	Asp	Ser	
435				440				445								
Val	Cys	Ser	Ser	Pro	Ser	Ile	Ser	Ser	Thr	Thr	Ser	Pro	Lys	Leu	Asp	
450				455				460								
Pro	Pro	Pro	Ser	Pro	His	Ala	Asn	Arg	Lys	Lys	His	Arg	Arg	Lys	Lys	
465					470				475				480			
Ser	Thr	Ser	Asn	Phe	Lys	Ala	Asp	Gly	Leu	Ser	Gly	Thr	Ala	Glu	Glu	
485				490				495								
Gln	Glu	Glu	Asn	Phe	Glu	Phe	Ile	Ile	Val	Ser	Leu	Thr	Gly	Gln	Thr	
500				505				510								
Trp	His	Phe	Glu	Ala	Thr	Thr	Tyr	Glu	Glu	Arg	Asp	Ala	Trp	Val	Gln	
515				520				525								
Ala	Ile	Glu	Ser	Gln	Ile	Leu	Ala	Ser	Leu	Gln	Ser	Cys	Glu	Ser	Ser	
530				535				540								
Lys	Asn	Lys	Ser	Arg	Leu	Thr	Ser	Gln	Ser	Glu	Ala	Met	Ala	Leu	Gln	
545					550				555				560			
Ser	Ile	Arg	Asn	Met	Arg	Gly	Asn	Ser	His	Cys	Val	Asp	Cys	Glu	Thr	
565				570				575								
Gln	Asn	Pro	Asn	Trp	Ala	Ser	Leu	Asn	Leu	Gly	Ala	Leu	Met	Cys	Ile	
580				585				590								
Glu	Cys	Ser	Gly	Ile	His	Arg	Asn	Leu	Gly	Thr	His	Leu	Ser	Arg	Val	
595				600				605								
Arg	Ser	Leu	Asp	Leu	Asp	Asp	Trp	Pro	Ile	Glu	Leu	Ile	Lys	Val	Met	
610				615				620								
Ser	Ser	Ile	Gly	Asn	Glu	Leu	Ala	Asn	Ser	Val	Trp	Glu	Glu	Ser	Ser	
625					630				635				640			
Gln	Gly	Arg	Thr	Lys	Pro	Ser	Val	Asp	Ser	Thr	Arg	Glu	Glu	Lys	Glu	
645				650				655								
Arg	Trp	Ile	Arg	Ala	Lys	Tyr	Glu	Gln	Lys	Leu	Phe	Leu	Ala	Pro	Leu	
660				665				670								
Pro	Cys	Thr	Glu	Leu	Ser	Leu	Gly	Gln	His	Leu	Leu	Arg	Ala	Thr	Ala	

675	680	685
Asp Glu Asp Leu Arg Thr Ala Ile Leu Leu Leu Ala His Gly Ser Arg		
690	695	700
Asp Glu Val Asn Glu Thr Cys Gly Glu Gly Asp Gly Arg Thr Ala Leu		
705	710	715
His Leu Ala Cys Arg Lys Gly Asn Val Val Leu Ala Gln Leu Leu Ile		
	725	730
Trp Tyr Gly Val Asp Val Thr Ala Arg Asp Ala His Gly Asn Thr Ala		
	740	745
Leu Ala Tyr Ala Arg Gln Ala Ser Ser Gln Glu Cys Ile Asp Val Leu		
	755	760
Leu Gln Tyr Gly Cys Pro Asp Glu Arg Phe Val Leu Met Ala Thr Pro		
	770	775
Asn Leu Ser Arg Arg Asn Asn Asn Arg Asn Asn Ser Ser Gly Arg Val		
785	790	795
Pro Thr Ile Ile		800

<210> 3785

<211> 1901

<212> DNA

<213> Homo sapiens

<400> 3785

```

tttttttttt tttttttttt tttttttttt tttttttttt ttctggtcaa actccctttt
60
tattaagggt tatcaagctg tacacgggtcc ctaccctgct ccgctccgag ttcgggcagc
120
gcaattcacc actctcccaa agccggacca cagctgggtg aggggtggga cagagagtag
180
gagcagtcctc agcatgcagt gcagcagccc aaagcctcgg gcgaggcatc gcccttcctc
240
ccccttcagg gcacagcgag atgcgggcca gagctctttt gctgggacgt acacagccaa
300
ggtcaccctc cagcccggtc tgtcccatgt gcaggtgatg ggggggtacga taagcagcaa
360
tgaggggccca ggaagacctc agtctcctgg gggcccatcc taaaagatgg caagggcagc
420
aaagtatttc catcctgctc ctacaattta gaaaccttct tttttagtgt caaaatatag
480
cggttgagggg agctggacgc taggggtcttc accctaacgc aaagcaaaag ccgaacggaa
540
cgggagcaag cgaacagaac aggagcaagc agcacacaca ggccagtgat gtgcaagaag
600
cggagagagg tgagccggct gcagcactgg gcgagaactg cgggtgaggt aagggccaca
660
gcctgacctg ctcatctatt gagggggcta ggggaaggtg caggggttga ggggtccaggc
720
ccaacctccc cactccacag ttggcacagg ttctccctgc ttggcagctt ctatcgtggg
780
cagccctctg gggacttgca ggggtaggtg taaaggtggc agtactgggg ctgggctggg
840
gaccagtttc tagcaccaca ctctgagcca agggggctct ggggatgagg ctagagtcctc
900

```

gtgtgccctc ggttcctagg ccccaaattc ctctcctggg gctgtggcaa gccagtggt
 960
 ggcacctccc ttggccaggc acagacacac aaacaccaca cacgtggggc cagggaacac
 1020
 tcagaggagc cgtcccatgg caggcagacg ggatggcagg gcagcgggtg cctccatect
 1080
 gggccacagg aaccctgctc agccttgtct ataccttgtg cacctgaggg ggtagctcat
 1140
 cctccgagcc ctcttcgggc acgggctcag ggtgccttga tgccgactgc ccatcttctg
 1200
 cccaccctcc aagaggcagc cgagagaaat gagaggggaac cctgggcact gtgccaggat
 1260
 ctgtgatgcc accgtagcgc ctctggaagc ccccatgcag ggcgggtggc tcaggagctc
 1320
 caggccgggg tgctgcacag ggatagctag cagagcgagg gatagactgg ggggcccggg
 1380
 cgccctctcc cccttcatca ggggcgcttt ctccactctc atcactctcc cggcgggtgcc
 1440
 atacatgccg ctgaggttca gcctgggcct gctgcttgtg gagctggtgc atatagaggg
 1500
 catgcaggct catctctgtg gatgcatatt ctgacagcac caggctctgc agctgtcctt
 1560
 cccacacgct gctcccggag ctggctgtcc tggcatccac cccagagcct gtcatgggtgc
 1620
 tgtgagcccg gcctgtgggc gcctgcccgg gttgcagcgg ggagaaggag cgcagggcag
 1680
 aggcgacttc agccctgtgc ctggagccct gcaggtctct gggcagtgga gggccccggc
 1740
 aggatgagcc agctaccaca ttgcgataa ggctcagggg ctcagactca gattgtaagg
 1800
 actggataga cgtaaagagg gcattttcag ggagcagacc cccttgggcg aggctagcag
 1860
 ctgctccatc ccgctgaacc tgctccttga ggaagcctag g
 1901

<210> 3786

<211> 168

<212> PRT

<213> Homo sapiens

<400> 3786

Met	Thr	Gly	Ser	Gly	Val	Asp	Ala	Arg	Thr	Ala	Ser	Ser	Gly	Ser	Ser
1				5					10					15	
Val	Trp	Glu	Gly	Gln	Leu	Gln	Ser	Leu	Val	Leu	Ser	Glu	Tyr	Ala	Ser
			20					25					30		
Thr	Glu	Met	Ser	Leu	His	Ala	Leu	Tyr	Met	His	Gln	Leu	His	Lys	Gln
		35					40					45			
Gln	Ala	Gln	Ala	Glu	Pro	Glu	Arg	His	Val	Trp	His	Arg	Arg	Glu	Ser
	50					55				60					
Asp	Glu	Ser	Gly	Glu	Ser	Ala	Pro	Asp	Glu	Gly	Gly	Glu	Gly	Ala	Arg
65				70					75					80	
Ala	Pro	Gln	Ser	Ile	Pro	Arg	Ser	Ala	Ser	Tyr	Pro	Cys	Ala	Ala	Pro
			85					90					95		
Arg	Pro	Gly	Ala	Pro	Glu	Thr	Thr	Ala	Leu	His	Gly	Gly	Phe	Gln	Arg

```

          100          105          110
Arg Tyr Gly Gly Ile Thr Asp Pro Gly Thr Val Pro Arg Val Pro Ser
          115          120          125
His Phe Ser Arg Leu Pro Leu Gly Gly Trp Ala Glu Asp Gly Gln Ser
          130          135          140
Ala Ser Arg His Pro Glu Pro Val Pro Glu Glu Gly Ser Glu Asp Glu
145          150          155          160
Leu Pro Pro Gln Val His Lys Val
          165

```

<210> 3787

<211> 717

<212> DNA

<213> Homo sapiens

<400> 3787

```

gcgtttgtcc agtattattc aaatgaccgg acataatgaa ggatggcgac aggacgaagg
60
cttctgccct aagattttctc tcattctcgtt ttaccatct tgtcttcgtg gccctcactt
120
gtggttggtg ctgctgtggt gttatggaca ctgctagtgt taatacagca caataagaaa
180
gtgtgaaagg ggccgggaaa ggtggcgagg gcggggcggc acgtgggttc ccctcacagc
240
actgtgcacg gtgcctgctt gggttcctcc atgtggacca gcaccgctga gcggccactc
300
tgcgccaggc actgttcatg ggtgatcacg gcagccccct tattacagac aagcaaactg
360
gggcttagcc agctcaggag gctcgcaggt aggtggggga gcctggagct gaaccaggc
420
gtctgacca ggtgctcccc cttagccacc tgctccatg agcacttggc accccagggc
480
cccgggggtg ctgcacgtga gccgtggcgt agcttaatcg acgcgcacaa ggattccgtg
540
tattcagtgt ttattgaggc tgtgttttga agcatgccat tgatagggtg aacataacat
600
ttttcttaga ataaaagcac attccataca ctctactgtg gcagaataag gaggttcaca
660
gataattgag agaagctacc gaaacgtgct gttttctgaa ggtctccctt cacgcgt
717

```

<210> 3788

<211> 113

<212> PRT

<213> Homo sapiens

<400> 3788

```

Met Leu Gln Asn Thr Ala Ser Ile Asn Thr Glu Tyr Thr Glu Ser Leu
 1          5          10          15
Cys Ala Ser Ile Lys Leu Arg His Gly Ser Arg Ala Ala Pro Pro Gly
          20          25          30
Pro Trp Gly Ala Lys Cys Ser Trp Arg Gln Val Ala Lys Gly Glu His
          35          40          45
Leu Gly Gln Thr Pro Gly Phe Ser Ser Arg Leu Pro His Leu Pro Ala

```

```

      50              55              60
Ser Leu Leu Ser Trp Leu Ser Pro Ser Leu Leu Val Cys Asn Lys Gly
65              70              75              80
Ala Ala Val Ile Thr His Glu Gln Cys Leu Ala Gln Ser Gly Arg Ser
      85              90              95
Ala Val Leu Val His Met Glu Glu Pro Lys Gln Ala Pro Cys Thr Val
      100              105              110
Leu

```

<210> 3789

<211> 4341

<212> DNA

<213> Homo sapiens

<400> 3789

```

ngaattcatt ttcaaaggag gcgaactacc tgtgccctaa ccttggaagc tggagaaaag
60
ttactgctca caactgacct gaaaactaaa gagtctgtgg gtaggagaat cagtcaactt
120
caggacagct ggaaagacat ggagccccag ctggcagaga tgattaagca gttccagagc
180
actgtagaga cctgggacca gtgtgaaaag aaaatcaagg agttgaaaag caggctgcaa
240
gttttaaagg cacaaagtga agatcctctt ccagagcttc acgaggacct ccataacgaa
300
aaagagctga ttaaggaact agaacagtct ttggctagct ggactcagaa cttgaaagaa
360
cttcaaacta tgaaggcgga cttaaccggg cacttctcgc tggaagatgt gatgggtttg
420
aaggagcaaa tagagcattt gcacagacaa tgggaggacc tctgcttaag ggtggccata
480
cgtaaacagg agattgaaga cagactcaat acatgggttg tattcaatga aaaaaataaa
540
gagttgtgtg cctggctggg gcagatggaa aacaaagttc tacagacagt ggacattagt
600
attgaagaaa tgattgaaaa gttacagaag gactgcatgg aagaaataaa cttgtttagt
660
gaaaacaagt tacagttaaa gcagatgggt gaccagttga tcaaggccag caacaaatca
720
agagcagctg agatcgatga caagctcaac aaaattaacg atcgttggca acatcttttt
780
gatgtcatcg gatcaagggg gaagaagctg aaggagacct ttgcttttat tcagcagttg
840
gacaaaaaca tgagcaacct tcgcacctgg ttggctcgaa ttgagtctga gctttccaag
900
cctgttgttt atgatgtctg cgatgatcaa gagatccaga agaggctcgc tgagcagcag
960
gatctacagc gagatattga acaacacagc gcaggggtgg agtccgtgtt taacatctgt
1020
gagtccttac tgcacgactc cgatgcctgt gcaaatgaga ccgagtgtga ctcgatccag
1080
cagaccacca ggagcctgga cagacgctgg aggaacattt gtgccatgtc catggagcgg
1140

```

cgcatgaaaa tcgaggagac gtggcgcttg tggcagaagt ttttagacga ctattctcgc
1200
tttgaggact ggctcaagtc agctgagagg acggcagcct gcccaaattc ctcagagggtg
1260
ttgtacacga gtgccaaaga ggaactgaag aggtttgagg cctttcagcg gcagattcat
1320
gagcggctca ctcagctgga gctcatcaac aagcagtacc ggcggtggc cggggagaac
1380
cgcacagaca cggccagcag gctgaagcag atgggtccacg agggcaacca gcgctgggac
1440
aaccttcaga ggcggtcac agccgtcctg cggagactca ggcatttcac caaccagagg
1500
gaagaatttg agggcaccag ggagagcatt ctggtgtggc tcacagagat ggacctgcag
1560
ctgaccaacg tggagcactt ctcagagagt gacgccgatg acaagatgcg ccaactgaat
1620
ggcttccaac aggaaattac attaaatacc aacaagattg atcagctcat tgtgtttggg
1680
gagcagctga ttcagaagag cgagcccctg gatgctgtgc tgattgagga tgagctggag
1740
gaactccacc gctactgcca ggaggtgttt ggaagggctc cccggttcca cggcggtc
1800
acctcctgca ctccgggctt ggaagatgaa aaggaggcct ctgagaatga aacagacatg
1860
gaagaccca gagaaatcca gactgattct tggcgtaaac ggggagagag cgaggaaccg
1920
tcattctctc agtcctctgtg tcattctagtg gccccagggc acgagcggtc tggctgcgag
1980
acctctgtca gcgtggactc catccccctg gagtgggacc acacaggcga cgtggggggc
2040
tcctctctc acgaagagga cgaggagggc ccatactaca gcgcactgtc aggtaaatcc
2100
atttcggatg gccactcgtg gcatgttccc gacagccctt cctgtcccga gcatcactac
2160
aagcaaattg aaggtgacag gaatgttcca cctgttcccc ctgcgtccag cacccttat
2220
aaaccaccct atggaaagct actattacct ccaggcacgg atggtggcaa agaaggcccg
2280
cgagtctga atggcaaccc acagcaggaa gacgggggac tggccggtat cacagagcag
2340
cagtcagggtg ccttcgacag atgggagatg attcaagcac aggagcttca caataagctc
2400
aaaataaaac aaaatttgca acagctgaac tctgatatca gcgccatcac tacttggctg
2460
aaaaaaactg aagcagagct ggaaatgtta aagatggcaa agcctccctc tgatatccag
2520
gaaatagaac tgagagtga gagactgcag gagatactga aagcctttga cacttacaag
2580
gcattagtgg tctctgtcaa cgtgagcagc aaggaatttc tgcaaaccga gagccccgaa
2640
tccacagagc tccaaagtag actccgccag ctgagcctgc tctgggaagc agcacagggc
2700
gcagtggaca gctggagagg gggcttacga cagtcgctca tgcaagtcca ggacttccac
2760

cagttgagtc aaaatctgct gctgtggtta gcgagtgcc aagaaccggag gcagaaggct
2820
catgtcaccg atccaaaggc agacccccgg gctctcctag agtgtcggag ggaactaatg
2880
caactggaaa aggagctggg agaacgtcaa cctcaagtgg acatgttaca ggagatttca
2940
aacagccttc tcattaaggg acatggagaa gactgtattg aagctgaaga aaagggtgcat
3000
gttattgaga agaaactcaa acagttacgg gagcaagtgt cccaagattt aatggccttg
3060
cagggaaacc agaaccagc ctaccccctg ccagcttcg acgaggtaga ctcgggggac
3120
cagcctcctg caacatccgt gccagctccc cgagcaaagc agttcagagc agtgagaact
3180
acagaaggcg aggaggagac agagagcagg gtccccggca gcacacggcc acagcgctcc
3240
ttcctctcaa ggggtggtccg ggcagcccta cccctgcagc tgctcctcct gctgctgctg
3300
ctcctggcct gcctgctgcc ctccctccgaa gaagactaca gctgcactca ggccaacaac
3360
tttgcccggg ccttttacct catgctgagg tacaccaatg ggccaccccc cacatagagg
3420
gcatagctgg ccacagtgt acaccacctg cctgattgcc aagggtgccc agcacgtggc
3480
cccagaccaa tctgagtgc ttagtggttg caaggtcccg ggacctgtgc agacttcttc
3540
tgggcttacc cagcacgggc tccttgagc ccagggcagc tttcagattg tgttctccc
3600
caggagcagg gaacctgtgt ggcagggtgcc ccgggtatct tggcagaact agttgattag
3660
tttagggatc tctggaaatg tcagtttcct gaagagccaa gcactttgtg aattctgggt
3720
tgtttgtaaa acagcattat tataatgtag gtatggtcaa tgagcagtgg tgtccatcac
3780
atatattata gaagcaagcg agcacattcc accctagaaa tgggttcagaa actcataggc
3840
acccttagct gatggaaaca atcaatcata tttaatacgc ttagaatcag ttttactcca
3900
atcagctggc aattttgagc tgccggttat acacaaaaat gttctgttca gtacctagct
3960
ctgctctttt atattgcttt aaatttttaa agaaattata ttgcatggat gtgggtattt
4020
gtgcatatct ttaacaatg cccaatctgt atgaataatg taaacttcga ttttttttta
4080
aaaaaattag attttagctg gagcttttga ctaatgtaaa gtaaatgcc aactaccgac
4140
ttgataggga tgtttttgta agttaatttt ctaagacttt ttccatcca aagtgatgct
4200
ttgctttggg ttttaactgt ttggccacgg cgggggtggg ggcggggggg tggtagagaa
4260
acttgaagct gtttgtgata tgtacaactc agatgtttct cattaaaaaa caaaattagc
4320
cagaaaaaaa aaaaaaaaaa a
4341

<210> 3790

<211> 1092

<212> PRT

<213> Homo sapiens

<400> 3790

```

Met Glu Pro Gln Leu Ala Glu Met Ile Lys Gln Phe Gln Ser Thr Val
 1          5          10          15
Glu Thr Trp Asp Gln Cys Glu Lys Lys Ile Lys Glu Leu Lys Ser Arg
 20          25          30
Leu Gln Val Leu Lys Ala Gln Ser Glu Asp Pro Leu Pro Glu Leu His
 35          40          45
Glu Asp Leu His Asn Glu Lys Glu Leu Ile Lys Glu Leu Glu Gln Ser
 50          55          60
Leu Ala Ser Trp Thr Gln Asn Leu Lys Glu Leu Gln Thr Met Lys Ala
 65          70          75          80
Asp Leu Thr Arg His Val Leu Val Glu Asp Val Met Val Leu Lys Glu
 85          90          95
Gln Ile Glu His Leu His Arg Gln Trp Glu Asp Leu Cys Leu Arg Val
100          105          110
Ala Ile Arg Lys Gln Glu Ile Glu Asp Arg Leu Asn Thr Trp Val Val
115          120          125
Phe Asn Glu Lys Asn Lys Glu Leu Cys Ala Trp Leu Val Gln Met Glu
130          135          140
Asn Lys Val Leu Gln Thr Val Asp Ile Ser Ile Glu Glu Met Ile Glu
145          150          155          160
Lys Leu Gln Lys Asp Cys Met Glu Glu Ile Asn Leu Phe Ser Glu Asn
165          170          175
Lys Leu Gln Leu Lys Gln Met Gly Asp Gln Leu Ile Lys Ala Ser Asn
180          185          190
Lys Ser Arg Ala Ala Glu Ile Asp Asp Lys Leu Asn Lys Ile Asn Asp
195          200          205
Arg Trp Gln His Leu Phe Asp Val Ile Gly Ser Arg Val Lys Lys Leu
210          215          220
Lys Glu Thr Phe Ala Phe Ile Gln Gln Leu Asp Lys Asn Met Ser Asn
225          230          235          240
Leu Arg Thr Trp Leu Ala Arg Ile Glu Ser Glu Leu Ser Lys Pro Val
245          250          255
Val Tyr Asp Val Cys Asp Asp Gln Glu Ile Gln Lys Arg Leu Ala Glu
260          265          270
Gln Gln Asp Leu Gln Arg Asp Ile Glu Gln His Ser Ala Gly Val Glu
275          280          285
Ser Val Phe Asn Ile Cys Asp Val Leu Leu His Asp Ser Asp Ala Cys
290          295          300
Ala Asn Glu Thr Glu Cys Asp Ser Ile Gln Gln Thr Thr Arg Ser Leu
305          310          315          320
Asp Arg Arg Trp Arg Asn Ile Cys Ala Met Ser Met Glu Arg Arg Met
325          330          335
Lys Ile Glu Glu Thr Trp Arg Leu Trp Gln Lys Phe Leu Asp Asp Tyr
340          345          350
Ser Arg Phe Glu Asp Trp Leu Lys Ser Ala Glu Arg Thr Ala Ala Cys
355          360          365
Pro Asn Ser Ser Glu Val Leu Tyr Thr Ser Ala Lys Glu Glu Leu Lys

```

370	375	380
Arg Phe Glu Ala Phe Gln Arg Gln Ile His Glu Arg Leu Thr Gln Leu		
385	390	395
Glu Leu Ile Asn Lys Gln Tyr Arg Arg Leu Ala Arg Glu Asn Arg Thr		400
	405	410
Asp Thr Ala Ser Arg Leu Lys Gln Met Val His Glu Gly Asn Gln Arg		415
	420	425
Trp Asp Asn Leu Gln Arg Arg Val Thr Ala Val Leu Arg Arg Leu Arg		430
	435	440
His Phe Thr Asn Gln Arg Glu Glu Phe Glu Gly Thr Arg Glu Ser Ile		445
	450	455
Leu Val Trp Leu Thr Glu Met Asp Leu Gln Leu Thr Asn Val Glu His		460
465	470	475
Phe Ser Glu Ser Asp Ala Asp Asp Lys Met Arg Gln Leu Asn Gly Phe		480
	485	490
Gln Gln Glu Ile Arg Leu Asn Thr Asn Lys Ile Asp Gln Leu Ile Val		495
	500	505
Phe Gly Glu Gln Leu Ile Gln Lys Ser Glu Pro Leu Asp Ala Val Leu		510
	515	520
Ile Glu Asp Glu Leu Glu Glu Leu His Arg Tyr Cys Gln Glu Val Phe		525
530	535	540
Gly Arg Val Ser Arg Phe His Arg Arg Leu Thr Ser Cys Thr Pro Gly		545
	550	555
Leu Glu Asp Glu Lys Glu Ala Ser Glu Asn Glu Thr Asp Met Glu Asp		560
	565	570
Pro Arg Glu Ile Gln Thr Asp Ser Trp Arg Lys Arg Gly Glu Ser Glu		575
	580	585
Glu Pro Ser Ser Pro Gln Ser Leu Cys His Leu Val Ala Pro Gly His		590
	595	600
Glu Arg Ser Gly Cys Glu Thr Pro Val Ser Val Asp Ser Ile Pro Leu		605
610	615	620
Glu Trp Asp His Thr Gly Asp Val Gly Gly Ser Ser Ser His Glu Glu		625
	630	635
Asp Glu Glu Gly Pro Tyr Tyr Ser Ala Leu Ser Gly Lys Ser Ile Ser		640
	645	650
Asp Gly His Ser Trp His Val Pro Asp Ser Pro Ser Cys Pro Glu His		655
	660	665
His Tyr Lys Gln Met Glu Gly Asp Arg Asn Val Pro Pro Val Pro Pro		670
	675	680
Ala Ser Ser Thr Pro Tyr Lys Pro Pro Tyr Gly Lys Leu Leu Leu Pro		685
	690	695
Pro Gly Thr Asp Gly Gly Lys Glu Gly Pro Arg Val Leu Asn Gly Asn		700
705	710	715
Pro Gln Gln Glu Asp Gly Gly Leu Ala Gly Ile Thr Glu Gln Gln Ser		720
	725	730
Gly Ala Phe Asp Arg Trp Glu Met Ile Gln Ala Gln Glu Leu His Asn		735
	740	745
Lys Leu Lys Ile Lys Gln Asn Leu Gln Gln Leu Asn Ser Asp Ile Ser		750
	755	760
Ala Ile Thr Thr Trp Leu Lys Lys Thr Glu Ala Glu Leu Glu Met Leu		765
	770	775
Lys Met Ala Lys Pro Pro Ser Asp Ile Gln Glu Ile Glu Leu Arg Val		780
785	790	795
Lys Arg Leu Gln Glu Ile Leu Lys Ala Phe Asp Thr Tyr Lys Ala Leu		800

805 810 815
 Val Val Ser Val Asn Val Ser Ser Lys Glu Phe Leu Gln Thr Glu Ser
 820 825 830
 Pro Glu Ser Thr Glu Leu Gln Ser Arg Leu Arg Gln Leu Ser Leu Leu
 835 840 845
 Trp Glu Ala Ala Gln Gly Ala Val Asp Ser Trp Arg Gly Gly Leu Arg
 850 855 860
 Gln Ser Leu Met Gln Cys Gln Asp Phe His Gln Leu Ser Gln Asn Leu
 865 870 875 880
 Leu Leu Trp Leu Ala Ser Ala Lys Asn Arg Arg Gln Lys Ala His Val
 885 890 895
 Thr Asp Pro Lys Ala Asp Pro Arg Ala Leu Leu Glu Cys Arg Arg Glu
 900 905 910
 Leu Met Gln Leu Glu Lys Glu Leu Val Glu Arg Gln Pro Gln Val Asp
 915 920 925
 Met Leu Gln Glu Ile Ser Asn Ser Leu Leu Ile Lys Gly His Gly Glu
 930 935 940
 Asp Cys Ile Glu Ala Glu Lys Val His Val Ile Glu Lys Lys Leu
 945 950 955 960
 Lys Gln Leu Arg Glu Gln Val Ser Gln Asp Leu Met Ala Leu Gln Gly
 965 970 975
 Thr Gln Asn Pro Ala Ser Pro Leu Pro Ser Phe Asp Glu Val Asp Ser
 980 985 990
 Gly Asp Gln Pro Pro Ala Thr Ser Val Pro Ala Pro Arg Ala Lys Gln
 995 1000 1005
 Phe Arg Ala Val Arg Thr Thr Glu Gly Glu Glu Glu Thr Glu Ser Arg
 1010 1015 1020
 Val Pro Gly Ser Thr Arg Pro Gln Arg Ser Phe Leu Ser Arg Val Val
 1025 1030 1035 1040
 Arg Ala Ala Leu Pro Leu Gln Leu Leu Leu Leu Leu Leu Leu Leu Leu
 1045 1050 1055
 Ala Cys Leu Leu Pro Ser Ser Glu Glu Asp Tyr Ser Cys Thr Gln Ala
 1060 1065 1070
 Asn Asn Phe Ala Arg Ser Phe Tyr Pro Met Leu Arg Tyr Thr Asn Gly
 1075 1080 1085
 Pro Pro Pro Thr
 1090

<210> 3791

<211> 1011

<212> DNA

<213> Homo sapiens

<400> 3791

tgatcaggtc acacacacgg tatactgtgt ctggcagctc atcaagacgg tggaagcagc
 60
 ctggcaacat agtatctgtg aaagtgtgga gctcatcttg ttccaacggg tcagcatccc
 120
 tgaaccttct ttaaacattt agcctcttcc tctcctgct tttcccgagc tttccgttcc
 180
 tcttctcct tccggcaagc aacttcctca ggtgactctg ccctttgatc cattggaata
 240
 tctgtccca gagacatagc aattgctctc atcatctggt cctcttcaga catgctgaga
 300

tcccgaacaa ctcctcccat gattggagga ggggtgggtta aaaggtactc tgtggcctgc
 360
 tccatgggtgc tgggtgttcaa cagtgcctcc attgcatggt cccttgtaga gcccattgtcc
 420
 atgagctggt gcagttgttg ctgggtgact tgagggtccc ggcgggagcc accttctct
 480
 tgccctgtat cctcttctcc tcgagacccc tccttctcct tgcttagtct ctctcgaatc
 540
 acaggttctc ctcgaggat gtggcataga atggccagca tcgattcagc cattcgtcca
 600
 ccatatacct tcaggggttt ccggttccat aagtttttga tgcaagtaaa ggctgctttc
 660
 tgagttacca caaggaagcg cagtgcactg aactggggaa agttctggac acctccaggc
 720
 aatttggcag gcagcgaatg tggagattca agcaccgtgg tgggattcac catcttctcc
 780
 accagcataa gccaggcatc taggaattct cctgtgccat caggcaagtc tgagtgttcc
 840
 aatccctcag aaacaggaac ttacctccc atggacagag cccagttgaa agtttcaaaa
 900
 agagcattgt ggcctccgga gcagagaaat ttttgcagca tgagggtgga gggatacttc
 960
 ctctcatcaa acagcattgg ggatgtgaaa ccaactgaac agatgaagaa t
 1011

<210> 3792

<211> 288

<212> PRT

<213> Homo sapiens

<400> 3792

Met	Leu	Phe	Asp	Glu	Arg	Lys	Tyr	Pro	Tyr	His	Leu	Met	Leu	Gln	Lys
1				5					10					15	
Phe	Leu	Cys	Ser	Gly	Gly	His	Asn	Ala	Leu	Phe	Glu	Thr	Phe	Asn	Trp
			20					25					30		
Ala	Leu	Ser	Met	Gly	Gly	Lys	Val	Pro	Val	Ser	Glu	Gly	Leu	Glu	His
			35			40						45			
Ser	Asp	Leu	Pro	Asp	Gly	Thr	Gly	Glu	Phe	Leu	Asp	Ala	Trp	Leu	Met
	50				55						60				
Leu	Val	Glu	Lys	Met	Val	Asn	Pro	Thr	Thr	Val	Leu	Glu	Ser	Pro	His
65					70					75				80	
Ser	Leu	Pro	Ala	Lys	Leu	Pro	Gly	Gly	Val	Gln	Asn	Phe	Pro	Gln	Phe
			85					90						95	
Ser	Ala	Leu	Arg	Phe	Leu	Val	Val	Thr	Gln	Lys	Ala	Ala	Phe	Thr	Cys
			100					105						110	
Ile	Lys	Asn	Leu	Trp	Asn	Arg	Lys	Pro	Leu	Lys	Val	Tyr	Gly	Gly	Arg
		115				120						125			
Met	Ala	Glu	Ser	Met	Leu	Ala	Ile	Leu	Cys	His	Ile	Leu	Arg	Gly	Glu
	130					135					140				
Pro	Val	Ile	Arg	Glu	Arg	Leu	Ser	Lys	Glu	Lys	Glu	Gly	Ser	Arg	Gly
145					150					155					160
Glu	Glu	Asp	Thr	Gly	Gln	Glu	Glu	Gly	Gly	Ser	Arg	Arg	Glu	Pro	Gln
				165				170						175	
Val	Asn	Gln	Gln	Gln	Leu	Gln	Gln	Leu	Met	Asp	Met	Gly	Phe	Thr	Arg

	180		185		190										
Glu	His	Ala	Met	Glu	Ala	Leu	Leu	Asn	Thr	Ser	Thr	Met	Glu	Gln	Ala
	195						200					205			
Thr	Glu	Tyr	Leu	Leu	Thr	His	Pro	Pro	Pro	Ile	Met	Gly	Gly	Val	Val
	210					215					220				
Arg	Asp	Leu	Ser	Met	Ser	Glu	Glu	Asp	Gln	Met	Met	Arg	Ala	Ile	Ala
225					230					235				240	
Met	Ser	Leu	Gly	Gln	Asp	Ile	Pro	Met	Asp	Gln	Arg	Ala	Glu	Ser	Pro
			245						250					255	
Glu	Glu	Val	Ala	Cys	Arg	Lys	Glu	Glu	Glu	Glu	Arg	Lys	Ala	Arg	Glu
	260						265						270		
Lys	Gln	Glu	Glu	Glu	Glu	Ala	Lys	Cys	Leu	Lys	Lys	Val	Gln	Gly	Cys
	275					280						285			

<210> 3793

<211> 360

<212> DNA

<213> Homo sapiens

<400> 3793

```

nnnatctgcc cacacttata tatgtgagtg tacacacaca cagagtgtgt gtgtgtgtgt
60
gtgtgtgtgt gtgtgtgtgt atttatattt cagatcacag gcagatttct gggctctgt
120
tactttgtgc cgggtaggaa caacagtttc ttttttctt ggagacagtg tttcactctt
180
gttgcccagg ctggagggca atggcgcgat ctcagctcac tgcaacctcc gcctttcggg
240
ctcaagagat tctcctgcct cagcctccca agtagctggg attacaggca tgcattacca
300
tgcaccatgc ccgactaatt ttgtattttt agtagagaca gggtttctcc atgttggtca
360

```

<210> 3794

<211> 96

<212> PRT

<213> Homo sapiens

<400> 3794

Val	Tyr	Thr	His	Thr	Glu	Cys	Val	Cys	Val	Cys	Val	Cys	Val	Cys	Val
1			5					10				15			
Cys	Val	Phe	Ile	Phe	Gln	Ile	Thr	Gly	Arg	Phe	Leu	Gly	Leu	Cys	Tyr
		20						25				30			
Phe	Val	Pro	Gly	Arg	Asn	Asn	Ser	Phe	Phe	Phe	Ser	Trp	Arg	Gln	Cys
	35					40					45				
Phe	Thr	Leu	Val	Ala	Gln	Ala	Gly	Gly	Gln	Trp	Arg	Asp	Leu	Ser	Ser
	50				55					60					
Leu	Gln	Pro	Pro	Pro	Phe	Gly	Leu	Lys	Arg	Phe	Ser	Cys	Leu	Ser	Leu
65				70					75					80	
Pro	Ser	Ser	Trp	Asp	Tyr	Arg	His	Ala	Ser	Pro	Cys	Thr	Met	Pro	Asp
			85					90						95	

<210> 3795

<211> 1341

<212> DNA

<213> Homo sapiens

<400> 3795

aactgcctgt acaagaaggg cctgatggc tatgaccccc agttcataac caagctgctc
60
cgcaactaca ggtctcatcc caccatcctg gacattccta accagctcta ttatgaaggg
120
gagctgcagg cctgtgctga tgcctgggat cgagaacgct tctgccgctg ggcgggccta
180
cctcgacagg gctttcccat catctttcac ggcgtaatgg gcaaagatga gcgtgaaggc
240
aacagcccat ccttcttcaa ccctgaagag gctgccacag tgacttcta cctgaagctg
300
ctcctggccc cctcctcaa gaaggga aaa gcccgctga gccctcgaag tgtgggcgtc
360
atctccccgt accggaaaca ggtggagaaa atccgttact gcatcacaa acttgacagg
420
gagcttcgag gactggatga catcaaggac ttgaagggtg gttcagtaga agaattcaa
480
ggccaagaac gaagcgtcat cctcatctcc accgtgcgaa gcagccagag ctttgtgcag
540
ctggatctgg actttaatct gggtttcctt aagaaccca agaggttcaa tntagctgtg
600
accggggcca aggcctgct catcatcgtg gggaaccccc ttctcctggg ccatgaccct
660
gactggaaag tattcctgga gttctgtaa gaaaacggag ggtataccgg gtgtcccttc
720
cctgccaaac tggacctgca acaggacag aatttactgc aaggctctgag caagctcagc
780
ccctctacct caggggccca cagccatgac tacctcccc aggagcggga ggggaaggg
840
ggcctgtctc tgcaagtga gccagagtgg aggaatgagc tctgaagaca cagcaccag
900
ccttctcgca ccagccaagc cttactgcc tgccctgacc tgaaccagaa cccagctgaa
960
ctgcccctcc aaggacagg aaggctgggg gagggagttt acaaccaag ccattccacc
1020
ccctcccctg ctggggagaa tgacacatca agctgctaac aattggggga aggggaagga
1080
agaaaactct gaaaacaaaa tcttgttcta tgcaaaagcc ttgataatgt ctctctgcc
1140
tgccccagc ttctgagcc cctaagctga ccctgtaggg aagggtggga ctttcagccc
1200
tgctgagggc cccatcccc tccagtggga gaggaacca gccccacac tcgggggagg
1260
aaaccagtg ggaggtggca gggaagccac ccacagggtt ctaagtttag cccctgcta
1320
cagaccactc cttcacgct t
1341

<210> 3796

<211> 294

<212> PRT

<213> Homo sapiens

<400> 3796

```

Asn Cys Leu Tyr Lys Lys Gly Pro Asp Gly Tyr Asp Pro Gln Phe Ile
 1           5           10           15
Thr Lys Leu Leu Arg Asn Tyr Arg Ser His Pro Thr Ile Leu Asp Ile
          20           25           30
Pro Asn Gln Leu Tyr Tyr Glu Gly Glu Leu Gln Ala Cys Ala Asp Val
          35           40           45
Val Asp Arg Glu Arg Phe Cys Arg Trp Ala Gly Leu Pro Arg Gln Gly
          50           55           60
Phe Pro Ile Ile Phe His Gly Val Met Gly Lys Asp Glu Arg Glu Gly
          65           70           75           80
Asn Ser Pro Ser Phe Asn Pro Glu Glu Ala Ala Thr Val Thr Ser
          85           90           95
Tyr Leu Lys Leu Leu Leu Ala Pro Ser Ser Lys Lys Gly Lys Ala Arg
          100          105          110
Leu Ser Pro Arg Ser Val Gly Val Ile Ser Pro Tyr Arg Lys Gln Val
          115          120          125
Glu Lys Ile Arg Tyr Cys Ile Thr Lys Leu Asp Arg Glu Leu Arg Gly
          130          135          140
Leu Asp Asp Ile Lys Asp Leu Lys Val Gly Ser Val Glu Glu Phe Gln
          145          150          155          160
Gly Gln Glu Arg Ser Val Ile Leu Ile Ser Thr Val Arg Ser Ser Gln
          165          170          175
Ser Phe Val Gln Leu Asp Leu Asp Phe Asn Leu Gly Phe Leu Lys Asn
          180          185          190
Pro Lys Arg Phe Asn Val Ala Val Thr Arg Ala Lys Ala Leu Leu Ile
          195          200          205
Ile Val Gly Asn Pro Leu Leu Leu Gly His Asp Pro Asp Trp Lys Val
          210          215          220
Phe Leu Glu Phe Cys Lys Glu Asn Gly Gly Tyr Thr Gly Cys Pro Phe
          225          230          235          240
Pro Ala Lys Leu Asp Leu Gln Gln Gly Gln Asn Leu Leu Gln Gly Leu
          245          250          255
Ser Lys Leu Ser Pro Ser Thr Ser Gly Pro His Ser His Asp Tyr Leu
          260          265          270
Pro Gln Glu Arg Glu Gly Glu Gly Gly Leu Ser Leu Gln Val Glu Pro
          275          280          285
Glu Trp Arg Asn Glu Leu
          290

```

<210> 3797

<211> 1970

<212> DNA

<213> Homo sapiens

<400> 3797

```

nnggaaccgc cgcgtgccag cccggccagg cacccttgca gcatggcctg gaacaccaac
60
ctccgctggc ggctgccgct cacctgcctg ctccctgcagg tgattatggt gattctcttc
120
ggggtgttcg tgcgctacga cttcgaggcc gacgcccact ggtggtcaga gaggacgcac
180

```


aagaacttga gcgacatgga gaacgaattc tactatcgct acccaagctt ccaggacgtg
240
cacgtgatgg tcttcgtggg cttcggcttc ctcatgactt tcctgcagcg ctacggcttc
300
agcgccgtgg gcttcaactt cctgttggca gccttcggca tccagtgggc gctgctcatg
360
cagggctggt tccacttctt acaagaccgc tacatcgctg tgggcgtgga gaacctcatc
420
aacgctgact tctgcgtggc ctctgtctgc gtggcctttg gggcagttct gggtaaagtc
480
agccccattc agctgctcat catgactttc ttccaagtga ccctcttcgc tgtgaatgag
540
ttcattctcc ttaacctgct aaagggtgaag gatgcaggag gctccatgac catccacaca
600
tttggcgctt actttgggct cacagtgacc cggatcctct accgacgcaa cctagagcag
660
agcaaggaga gacagaattc tgtgtaccag tcggacctct ttgccatgat tggcaccctc
720
ttcctgtgga tgtactggcc cagcttcaac tcagccatat cctaccatgg ggacagccag
780
caccgagccg ccatcaacac ctactgctcc ttggcagcct gcgtgcttac ctcggtggca
840
atatccagtg ccctgcacaa gaagggcaag ctggacatgg tgcacatcca gaatgccag
900
ctcgcaggag ggggtggccgt ggggtaccgt gctgagatga tgctcatgcc ttacggtgcc
960
ctcatcatcg gcttcgtctg cggcatcatc tccaccctgg gttttgtata cctgacccca
1020
ttcctggagt cccggctgca catccaggac acatgtggca ttaacaatct gcatggcatt
1080
cctggcatca tagggggcat cgtgggtgct gtgacagcgg cctccgccag ccttgaagtc
1140
tatggaaaag aagggcttgt ccattccttt gactttcaag gtttcaacgg ggactggacc
1200
gcaagaacac agggaaagt ccagatttat ggtctcttgg tgaccctggc catggccctg
1260
atgggtggca tcattgtggg gctcattttg agattaccat tctggggaca accttcagat
1320
gagaactgct ttgaggatgc ggtctactgg gagatgcctg aagggaacag cactgtctac
1380
atccctgagg accccacctt caagccctca ggaccctcag taccctcagt acccatggtg
1440
tccccactac ccatggcttc ctcggtacct ttggtacctt aggctcccag ggcaggtgag
1500
gagcaggctc cacagactgt cctggggccc agaggagctg gtgctgacct agctagggat
1560
gcaagagtga gcaagcagca cccccacctg ctggcttggc ctcaaggtgc ctccaccct
1620
gccctccctt tcatcccagg gggctctgct gagaatggag aaggagaagc taaaaagtgg
1680
gcatccaagc cgggttctgg ctgcagaagt tctgcctctg cctggggctt tggccacatt
1740
ggagaaaaac aggtctaaaag tggggctggg acctggtggg tgaacctgag ctctcccagg
1800

agacaactta gctgccagtc accacctatg aggtcttctt accccgtgcc tgcacctcgg
 1860
 ccagcatctc ctatgctccc tgggtccccc agacctctct gtgttggtg cgtggcagcc
 1920
 tccaggaata aacattcttg ttgtcctttg taaaaaaaaa aaaaaaaaaa
 1970

<210> 3798

<211> 473

<212> PRT

<213> Homo sapiens

<400> 3798

Leu	Arg	Trp	Arg	Leu	Pro	Leu	Thr	Cys	Leu	Leu	Leu	Gln	Val	Ile	Met
1				5					10					15	
Val	Ile	Leu	Phe	Gly	Val	Phe	Val	Arg	Tyr	Asp	Phe	Glu	Ala	Asp	Ala
			20					25					30		
His	Trp	Trp	Ser	Glu	Arg	Thr	His	Lys	Asn	Leu	Ser	Asp	Met	Glu	Asn
		35					40					45			
Glu	Phe	Tyr	Tyr	Arg	Tyr	Pro	Ser	Phe	Gln	Asp	Val	His	Val	Met	Val
	50					55					60				
Phe	Val	Gly	Phe	Gly	Phe	Leu	Met	Thr	Phe	Leu	Gln	Arg	Tyr	Gly	Phe
65					70					75					80
Ser	Ala	Val	Gly	Phe	Asn	Phe	Leu	Leu	Ala	Ala	Phe	Gly	Ile	Gln	Trp
				85					90					95	
Ala	Leu	Leu	Met	Gln	Gly	Trp	Phe	His	Phe	Leu	Gln	Asp	Arg	Tyr	Ile
			100					105					110		
Val	Val	Gly	Val	Glu	Asn	Leu	Ile	Asn	Ala	Asp	Phe	Cys	Val	Ala	Ser
		115					120					125			
Val	Cys	Val	Ala	Phe	Gly	Ala	Val	Leu	Gly	Lys	Val	Ser	Pro	Ile	Gln
		130				135					140				
Leu	Leu	Ile	Met	Thr	Phe	Phe	Gln	Val	Thr	Leu	Phe	Ala	Val	Asn	Glu
145					150					155					160
Phe	Ile	Leu	Leu	Asn	Leu	Leu	Lys	Val	Lys	Asp	Ala	Gly	Gly	Ser	Met
				165					170					175	
Thr	Ile	His	Thr	Phe	Gly	Ala	Tyr	Phe	Gly	Leu	Thr	Val	Thr	Arg	Ile
			180					185					190		
Leu	Tyr	Arg	Arg	Asn	Leu	Glu	Gln	Ser	Lys	Glu	Arg	Gln	Asn	Ser	Val
		195					200					205			
Tyr	Gln	Ser	Asp	Leu	Phe	Ala	Met	Ile	Gly	Thr	Leu	Phe	Leu	Trp	Met
	210					215					220				
Tyr	Trp	Pro	Ser	Phe	Asn	Ser	Ala	Ile	Ser	Tyr	His	Gly	Asp	Ser	Gln
225					230					235					240
His	Arg	Ala	Ala	Ile	Asn	Thr	Tyr	Cys	Ser	Leu	Ala	Ala	Cys	Val	Leu
				245					250					255	
Thr	Ser	Val	Ala	Ile	Ser	Ser	Ala	Leu	His	Lys	Lys	Gly	Lys	Leu	Asp
			260					265					270		
Met	Val	His	Ile	Gln	Asn	Ala	Thr	Leu	Ala	Gly	Gly	Val	Ala	Val	Gly
		275					280					285			
Thr	Ala	Ala	Glu	Met	Met	Leu	Met	Pro	Tyr	Gly	Ala	Leu	Ile	Ile	Gly
	290					295					300				
Phe	Val	Cys	Gly	Ile	Ile	Ser	Thr	Leu	Gly	Phe	Val	Tyr	Leu	Thr	Pro
305					310					315					320
Phe	Leu	Glu	Ser	Arg	Leu	His	Ile	Gln	Asp	Thr	Cys	Gly	Ile	Asn	Asn

```

          325          330          335
Leu His Gly Ile Pro Gly Ile Ile Gly Gly Ile Val Gly Ala Val Thr
          340          345          350
Ala Ala Ser Ala Ser Leu Glu Val Tyr Gly Lys Glu Gly Leu Val His
          355          360          365
Ser Phe Asp Phe Gln Gly Phe Asn Gly Asp Trp Thr Ala Arg Thr Gln
          370          375          380
Gly Lys Phe Gln Ile Tyr Gly Leu Leu Val Thr Leu Ala Met Ala Leu
385          390          395          400
Met Gly Gly Ile Ile Val Gly Leu Ile Leu Arg Leu Pro Phe Trp Gly
          405          410          415
Gln Pro Ser Asp Glu Asn Cys Phe Glu Asp Ala Val Tyr Trp Glu Met
          420          425          430
Pro Glu Gly Asn Ser Thr Val Tyr Ile Pro Glu Asp Pro Thr Phe Lys
          435          440          445
Pro Ser Gly Pro Ser Val Pro Ser Val Pro Met Val Ser Pro Leu Pro
          450          455          460
Met Ala Ser Ser Val Pro Leu Val Pro
465          470

```

<210> 3799

<211> 210

<212> DNA

<213> Homo sapiens

<400> 3799

```

tcgaggaact gctcggcctc cacatcccaa gcctcacctt ctccctgcat cacagagaga
60
agcaagcaga aggcccgag gagaacaaga tccagctcct cctcctcttc ttccagttct
120
tctagctcct cttcttctc ctcgtcctcc tcctcttctt ccagtgatgg ccggaagaag
180
cgggggaagt acaaggacaa gaggaggaag
210

```

<210> 3800

<211> 70

<212> PRT

<213> Homo sapiens

<400> 3800

```

Ser Arg Asn Cys Ser Ala Ser Thr Ser Gln Ala Ser Pro Ser Pro Cys
1          5          10          15
Ile Thr Glu Arg Ser Lys Gln Lys Ala Arg Arg Arg Thr Arg Ser Ser
20          25          30
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser
35          40          45
Ser Ser Ser Ser Ser Ser Ser Asp Gly Arg Lys Lys Arg Gly Lys Tyr
50          55          60
Lys Asp Lys Arg Arg Lys
65          70

```

<210> 3801

<211> 4070

<212> DNA

<213> Homo sapiens

<400> 3801

ngctagcccc gcggaagca ctgacgtgtc tctcggcggg gctgctgtgc agtggaaacgc
60
gctgggcccgc gggcagcgtc gcctcacgcg gagcagagct gagctgaagc gggacccgga
120
gcccagcag ccccgcccat ggcaatcaaa tttctggaag tcatcaagcc cttctgtgtc
180
atcctgcccg aaattcagaa gccagagagg aagattcagt ttaaggagaa agtgcgtgtg
240
accgctatca ccctctttat cttcttagtg tgctgccaga ttccccgtt tgggatcatg
300
tcttcagatt cagctgacct tttctattgg atgagagtga ttctagcctc taacagaggc
360
acattgatgg agctagggat ctctcctatt gtcacgtctg gccttataat gcaactcttg
420
gctggcgcca agataattga agttggtgac accccaaaag accgagctct cttcaacgga
480
gcccaaaagt tatttgcat gatcattact atcggccagt ctatcgtgta tgtgatgacc
540
gggatgtatg gggacccttc tgaaatgggt gctggaattt gcctgctaata catcattcag
600
ctctttgttg ctggtttgat tgcctactt ttggatgagc tgctacagaa gggttacggc
660
ttggggtctg ggatttccct ctttattgcc accaaccatct gtgagaccat tgtctggaag
720
gccttttagtc ccactaccat taacactggc agaggtactg agtttgaggg tgcagtcata
780
gctctgttcc atttgttggc caccaggacg gacaaagtcc gagctttacg ggaggctttt
840
tatcggcaga acttacccaa cctcatgaat ctcatcgcca ccatctttgt ctttgagtg
900
gtcatctatt tccagggtt ccgagtggac ctgccaatca agtcggcccc ctaccgtggc
960
cagtacaaca cctatcccat caagctcttc tatacgtcca acatcccat catcctgcag
1020
tcggccctgg tgtccaacct ttatgttatt tcccaaatgc tctcagctcg atttagtggc
1080
aacttttttag taaatttact aggacagtgg tcggacacgt cttctggggg ccagcacgt
1140
gcttatccag ttggtggcct ttgctattac ctgtccctc cagaatcttt tggctccgtg
1200
ttagaagacc cggccatgc agttgtatac atagtgttca tgctgggctc ctgtgcattc
1260
ttctccaaaa cgtggattga ggtctcaggt tcctctgcca aagatgttgc aaagcagctg
1320
aaggagcagc agatggtgat gagaggccac cgagagacct ccatgggtcca tgaactcaac
1380
cggtagatcc ccacagccgc ggcctttggt gggctgtgca tcggggccct ctcggtcctg
1440
gctgacttcc taggcgcat tgggtctgga accgggatcc tgctcgagc cacaatcacc
1500

taccagtact ttgagatctt cgtaaggag caaagcgagg ttggcagcat gggggccctg
1560
ctcttctgag cccgtctccc ggacagggtg aggaagctgc tccagaagcg cctcggaagg
1620
ggagctctca tcatggcgcg tgctgctgcg gcatatggac ttttaataat gtttttgaat
1680
ttcgtattct ttcattccac tgtgtaaagt gctagacatt ttccaattta aaattttgct
1740
ttttatcctg gcactggcaa aaagaactgt gaaagtgaaa ttttattcag ccgactgcc
1800
gagaagtggg aatggatatag gattgtcccc aagtgtccat gtaacttttg ttttaacctt
1860
tgcaccttct cagtgtgta tgcggctgca gccgtctcac ctgtttcccc acaaagggaa
1920
tttctcactc tggttggaag cacaacact gaaatgtcta cgtttcattt tggcagtagg
1980
gtgtgaagct gggagcagat catgtatttc ccggagacat gggaccttgc tggcatgtct
2040
ccttcacaat caggcgtggg aatatctggc ttaggactgt ttctctctaa gacaccattg
2100
ttttccctta ttttaaaagt gattttttta aggacagaac ttcttccaaa agagagggat
2160
ggctttccca gaagacactc ctggccatct gtggatttgt ctgtgcacct attggctctt
2220
ctagctgact cttctgggtg ggcttagagt ctgcctgttt ctgctagctc cgtgttttagt
2280
ccacttgggt catcagctct gccaagctga gcctggccaa gctaggtgga cagacccttg
2340
cagtgatgtc cgtttgtcca gattctgcca gtcactactg gacacgtctc ctgcgagctg
2400
ccctagcaag gggagacatt gtggtagcta tcagacatgg acagaaactg acttagtgct
2460
cacaagcccc tacaccttct gggctgaaga tcaccagct gtgttcagaa ttttcttact
2520
gtgcttagga ctgcacgcaa gtgagcagac accaccgact tcctttctgc gtcaccagt
2580
tcgtcagcag agagaggaca gcacaggctc aaggttggta gtgaagtcag gttcgggggtg
2640
catgggctgt ggtgggtgtg atcagttgct ccagtgtttg aaataagaag actcatgttt
2700
atgtctggaa taagttctgt ttgtgctgac aggtggccta ggtcctggag atgagcacc
2760
tctctctggc ctttagggag tcccctctta ggacaggcac tgcccagcag caagggcagc
2820
agagttgggt gctaagatcc tgaggagctc gaggtttcga gctggcttta gacattggtg
2880
ggaccaagga tgttttgcag gatgccctga tcctaagaag ggggcctggg ggtgcgtgca
2940
gcctgtcggg gagacccac tctgacagtg ggcacacggc agcctgcaaa gcacagggcc
3000
accgccacag cccggcagag gggcacactc tggagacctt gctggcagtg ctagccagga
3060
aacagagtga ccaagggaca agaagggact tgcctaaagc caccagcaa ctcagcagca
3120

gaaccaagat gggccccagg ctctccata tggcccaggg cttaccaccc tatcacacgt
 3180
 ggccttgtct agacccagtc ctgagcaggg gagaggctct tgagacctga tgccctccta
 3240
 cccacatggt tctcccactg cctgtctgc tctgctgcta cagaggggca gggcctcccc
 3300
 cagcccacgc ttaggaatgc ttggcctctg gcaggcaggc agctgtaccc aagctggtgg
 3360
 gcagggggct ggaaggcacc aggcctcagg aggagcccca tagtcccgc tgcagcctgt
 3420
 aaccatcggc tgggccctgc aaggcccaca ctcacgcctt gtgggtgatg gtcacggtgg
 3480
 gtgggtgggg gctgacccca gcttcagggt gactgtcact gtggacgcca aaatggcata
 3540
 actgagataa ggtgaataag tgacaaataa agccagtttt ttacaaggta cttgatcatg
 3600
 ttctcttaat cttaaattag attttattcc caaaaaggcc agtgaggcgc aaagcttggt
 3660
 tgcagcttta tgttgttcaa aggcttggtt ggcgcactca ggcattttgc ctggaaaagt
 3720
 tcccttctga tggatcatgtc aacctggtgc tcacatttgt gataaagtga tatgggtgct
 3780
 gggccacatg tggagctgct gcagggtctt gcccgtgagg cagagtgcac tggctgtccc
 3840
 gtgagaatgc agaggcctcc gctgagccag ggcgcctgcc acccgtgga agagtgggaa
 3900
 ccttctagca ggagcctagg gcccataac tcgaagccct ttgagcctca gctccagtac
 3960
 ccagctggtg attggagaag tcttaacttg gttgtgaggg tggcctcaga cccgacctgt
 4020
 agccaagcca gaaggacca gtgttgtgtg ggtgggagtg gcaggcttgt
 4070

<210> 3802

<211> 476

<212> PRT

<213> Homo sapiens

<400> 3802

Met Ala Ile Lys Phe Leu Glu Val Ile Lys Pro Phe Cys Val Ile Leu
 1 5 10 15
 Pro Glu Ile Gln Lys Pro Glu Arg Lys Ile Gln Phe Lys Glu Lys Val
 20 25 30
 Leu Trp Thr Ala Ile Thr Leu Phe Ile Phe Leu Val Cys Cys Gln Ile
 35 40 45
 Pro Leu Phe Gly Ile Met Ser Ser Asp Ser Ala Asp Pro Phe Tyr Trp
 50 55 60
 Met Arg Val Ile Leu Ala Ser Asn Arg Gly Thr Leu Met Glu Leu Gly
 65 70 75 80
 Ile Ser Pro Ile Val Thr Ser Gly Leu Ile Met Gln Leu Leu Ala Gly
 85 90 95
 Ala Lys Ile Ile Glu Val Gly Asp Thr Pro Lys Asp Arg Ala Leu Phe
 100 105 110
 Asn Gly Ala Gln Lys Leu Phe Gly Met Ile Ile Thr Ile Gly Gln Ser

115	120	125
Ile Val Tyr Val Met Thr Gly Met Tyr Gly Asp Pro Ser Glu Met Gly		
130	135	140
Ala Gly Ile Cys Leu Leu Ile Ile Ile Gln Leu Phe Val Ala Gly Leu		
145	150	155
Ile Val Leu Leu Leu Asp Glu Leu Leu Gln Lys Gly Tyr Gly Leu Gly		
165	170	175
Ser Gly Ile Ser Leu Phe Ile Ala Thr Asn Ile Cys Glu Thr Ile Val		
180	185	190
Trp Lys Ala Phe Ser Pro Thr Thr Ile Asn Thr Gly Arg Gly Thr Glu		
195	200	205
Phe Glu Gly Ala Val Ile Ala Leu Phe His Leu Leu Ala Thr Arg Thr		
210	215	220
Asp Lys Val Arg Ala Leu Arg Glu Ala Phe Tyr Arg Gln Asn Leu Pro		
225	230	235
Asn Leu Met Asn Leu Ile Ala Thr Ile Phe Val Phe Ala Val Val Ile		
245	250	255
Tyr Phe Gln Gly Phe Arg Val Asp Leu Pro Ile Lys Ser Ala Arg Tyr		
260	265	270
Arg Gly Gln Tyr Asn Thr Tyr Pro Ile Lys Leu Phe Tyr Thr Ser Asn		
275	280	285
Ile Pro Ile Ile Leu Gln Ser Ala Leu Val Ser Asn Leu Tyr Val Ile		
290	295	300
Ser Gln Met Leu Ser Ala Arg Phe Ser Gly Asn Phe Leu Val Asn Leu		
305	310	315
Leu Gly Gln Trp Ser Asp Thr Ser Ser Gly Gly Pro Ala Arg Ala Tyr		
325	330	335
Pro Val Gly Gly Leu Cys Tyr Tyr Leu Ser Pro Pro Glu Ser Phe Gly		
340	345	350
Ser Val Leu Glu Asp Pro Val His Ala Val Val Tyr Ile Val Phe Met		
355	360	365
Leu Gly Ser Cys Ala Phe Phe Ser Lys Thr Trp Ile Glu Val Ser Gly		
370	375	380
Ser Ser Ala Lys Asp Val Ala Lys Gln Leu Lys Glu Gln Gln Met Val		
385	390	395
Met Arg Gly His Arg Glu Thr Ser Met Val His Glu Leu Asn Arg Tyr		
405	410	415
Ile Pro Thr Ala Ala Phe Gly Gly Leu Cys Ile Gly Ala Leu Ser		
420	425	430
Val Leu Ala Asp Phe Leu Gly Ala Ile Gly Ser Gly Thr Gly Ile Leu		
435	440	445
Leu Ala Val Thr Ile Ile Tyr Gln Tyr Phe Glu Ile Phe Val Lys Glu		
450	455	460
Gln Ser Glu Val Gly Ser Met Gly Ala Leu Leu Phe		
465	470	475

<210> 3803

<211> 345

<212> DNA

<213> Homo sapiens

<400> 3803

ccaagaggaa actccttgaa gaggctacag gaagaaacag gtgctaaaat gtctatcctg

60

ggcaaaggat caatgagaga taaagctaag gaagaagaac taaggaagag tggggaagcc
 120
 aaatatgccc acttgagtga tgagcttcat gtattaattg aagtgtttgc tccacctggg
 180
 gaagcttatt cacgtatgag tcatgcattg gaagagatta aaaaattcct ggttcctgac
 240
 tacaatgatg aaattcgtca ggaacaacta cgtgaattat cttacttaaa tggctcagag
 300
 gactctgggc gtggcagagg tattagaggc agagggatcc ggatt
 345

<210> 3804

<211> 115

<212> PRT

<213> Homo sapiens

<400> 3804

Pro	Arg	Gly	Asn	Ser	Leu	Lys	Arg	Leu	Gln	Glu	Glu	Thr	Gly	Ala	Lys
1				5				10						15	
Met	Ser	Ile	Leu	Gly	Lys	Gly	Ser	Met	Arg	Asp	Lys	Ala	Lys	Glu	Glu
			20					25					30		
Glu	Leu	Arg	Lys	Ser	Gly	Glu	Ala	Lys	Tyr	Ala	His	Leu	Ser	Asp	Glu
			35				40					45			
Leu	His	Val	Leu	Ile	Glu	Val	Phe	Ala	Pro	Pro	Gly	Glu	Ala	Tyr	Ser
			50				55				60				
Arg	Met	Ser	His	Ala	Leu	Glu	Glu	Ile	Lys	Lys	Phe	Leu	Val	Pro	Asp
65					70					75				80	
Tyr	Asn	Asp	Glu	Ile	Arg	Gln	Glu	Gln	Leu	Arg	Glu	Leu	Ser	Tyr	Leu
				85				90					95		
Asn	Gly	Ser	Glu	Asp	Ser	Gly	Arg	Gly	Arg	Gly	Ile	Arg	Gly	Arg	Gly
			100					105					110		
Ile	Arg	Ile													
			115												

<210> 3805

<211> 1923

<212> DNA

<213> Homo sapiens

<400> 3805

ataaaatattt taaaagggtgg ggggctggaa ctggcagagt ataagtggca ctgtgtgttg
 60
 ctgagctgaa ctccatgccc tgtgaacaat ataagcaaca gtcctgctat ttccactgac
 120
 aagagcccgt tgccctaccag atgccaggcc ctgtgcttcc tccctgccttt gaggttttgg
 180
 cttgtgatca accaggaggg aaacatggtt actgctcgcc aggaacctcg cctggctcctg
 240
 atttccctga cctgcgatgg tgacaccctg actctcagtg cagcctacac aaaggacctg
 300
 ctactgccta tcaaaacgcc caccacaaat gcagtgcaca agtgcagagt gcacggcctg
 360
 gagatagagg gcagggactg tggcgaggcc gccgccagtg ggataaccag cttcctgaag
 420

tcacagccct accgcctggt gcacttcgag cctcacatgc gaccgagacg tcctcatcaa
480
atagcagact tggtccgacc caaggaccag attgcttact cagacaccag cccattcttg
540
atccttttctg aggcgctcgt ggcggtatctc aactccaggc tagagaagaa agttaagca
600
accaacttca ggcccaatat tgtaatttca ggatgcgatg tctatgcaga ggattcttgg
660
gatgagcttc ttattggtga cgtggaactg aaaaggggtga tggcttggtc cagatgcatt
720
ttaaccacag tggaccacaga caccggtgtc atgagcagga aggaaccgct ggaaacactg
780
aagagttatc gccagtgtga cccttcagaa cgaaagttat atggaaaatc accactcttt
840
gggcagtatt ttgtgctgga aaaccaggg accatcaaag tgggagaccc tgtgtacctg
900
ctgggccagt aatgggaacc gtatgtcctg gaatattaga tgcccttttaa aaatgttctc
960
aaaatgaca acacttgaag catggtgttt cagaactgag acctctacat tttctttaa
1020
tttgtgattt tcacattttt cgtcttttgg acttctggtg tctcaatgct tcaatgtccc
1080
agtgcaaaaa gtaaagaaat atagtctcaa taacttagta ggacttcagt aagtcactta
1140
aatgacaaga caggattctg aaaactcccc gtttaactga ttatggaata gttctttctc
1200
ctgcttctcc gtttatctac caagagcgca gacttgcac cgtgcactac cactcgtag
1260
agaaagagaa gaagagaaag aggaagagtg ggtgggctgg aagaatgtcc tagaatgtgt
1320
tattgcccct gttcatgagg tacgcaatga aaattaaatt gcaccccaaa tatggctgga
1380
atgccacttc ctttttcttc tcaagccccg ggctagcttt tgaaatggca taaagactga
1440
ggtgaccttc aggaagcact gcagatatta attttccata gatctggatc tggccctgct
1500
gcttctcaga cagcattgga tttcctaaag gtgctcagga ggatggttgt gtagtcatgg
1560
aggacccctg gatccttgcc attccctca gctaatacag gagtgtcct tctccagttc
1620
cgggtgaaaa agttctgaat tctgtggagg agaagaaaag tgattcagtg atttcagata
1680
gactactgaa aaccttttaa gggggaaaag gaaagcatat gtcagttgtt taaaacccaa
1740
tatctatttt ttaactgatt gtataactct aagatctgat gaagtatatt ttttattgcc
1800
attttgctct ttgattatat tgggaagttg actaaacttg aaaaatgttt ttaaaactgt
1860
gaataaatgg aagctacttt gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1920
aaa
1923

<210> 3806

<211> 280
 <212> PRT
 <213> Homo sapiens

<400> 3806

Thr	Pro	Cys	Pro	Val	Asn	Asn	Ile	Ser	Asn	Ser	Pro	Ala	Ile	Ser	Thr
1				5					10					15	
Asp	Lys	Ser	Pro	Leu	Pro	Thr	Arg	Cys	Gln	Ala	Leu	Cys	Phe	Leu	Leu
			20					25					30		
Pro	Leu	Arg	Phe	Trp	Leu	Val	Ile	Asn	Gln	Glu	Gly	Asn	Met	Val	Thr
	35					40						45			
Ala	Arg	Gln	Glu	Pro	Arg	Leu	Val	Leu	Ile	Ser	Leu	Thr	Cys	Asp	Gly
	50					55					60				
Asp	Thr	Leu	Thr	Leu	Ser	Ala	Ala	Tyr	Thr	Lys	Asp	Leu	Leu	Leu	Pro
65					70					75					80
Ile	Lys	Thr	Pro	Thr	Thr	Asn	Ala	Val	His	Lys	Cys	Arg	Val	His	Gly
				85					90					95	
Leu	Glu	Ile	Glu	Gly	Arg	Asp	Cys	Gly	Glu	Ala	Ala	Ala	Gln	Trp	Ile
			100					105					110		
Thr	Ser	Phe	Leu	Lys	Ser	Gln	Pro	Tyr	Arg	Leu	Val	His	Phe	Glu	Pro
		115					120					125			
His	Met	Arg	Pro	Arg	Arg	Pro	His	Gln	Ile	Ala	Asp	Leu	Phe	Arg	Pro
	130					135					140				
Lys	Asp	Gln	Ile	Ala	Tyr	Ser	Asp	Thr	Ser	Pro	Phe	Leu	Ile	Leu	Ser
145					150					155					160
Glu	Ala	Ser	Leu	Ala	Asp	Leu	Asn	Ser	Arg	Leu	Glu	Lys	Lys	Val	Lys
				165					170					175	
Ala	Thr	Asn	Phe	Arg	Pro	Asn	Ile	Val	Ile	Ser	Gly	Cys	Asp	Val	Tyr
			180					185					190		
Ala	Glu	Asp	Ser	Trp	Asp	Glu	Leu	Leu	Ile	Gly	Asp	Val	Glu	Leu	Lys
	195						200					205			
Arg	Val	Met	Ala	Cys	Ser	Arg	Cys	Ile	Leu	Thr	Thr	Val	Asp	Pro	Asp
	210					215						220			
Thr	Gly	Val	Met	Ser	Arg	Lys	Glu	Pro	Leu	Glu	Thr	Leu	Lys	Ser	Tyr
225					230					235					240
Arg	Gln	Cys	Asp	Pro	Ser	Glu	Arg	Lys	Leu	Tyr	Gly	Lys	Ser	Pro	Leu
				245					250					255	
Phe	Gly	Gln	Tyr	Phe	Val	Leu	Glu	Asn	Pro	Gly	Thr	Ile	Lys	Val	Gly
			260					265					270		
Asp	Pro	Val	Tyr	Leu	Leu	Gly	Gln								
		275					280								

<210> 3807
 <211> 372
 <212> DNA
 <213> Homo sapiens

<400> 3807

nacgcgtggc ggctgagcga ggtgaacgag gacttcagct tgtgccccag atacccccgt
 60
 gcggtgatcg tgccatactt ggtggacgat gatgccctgg cgcgacagcg ccgcttcgct
 120
 caggagggtc gcttcccgtt gctcagctac caccgggtc ccagcggcag agggagcgcg
 180

ccctccccac gctccgcccc tgggtggctg cgctctttct gggccttttc tttttggccc
 240
 ggtcaattcg cggcgtagcc gctgccccaa ctctgcccc attctggtec egccccctc
 300
 ccgccttttc gctgggaagg gtatcacctt tctctggccc cgccccctgac ggttcggggc
 360
 cccgcgaagc tt
 372

<210> 3808

<211> 85

<212> PRT

<213> Homo sapiens

<400> 3808

Xaa	Ala	Trp	Arg	Leu	Ser	Glu	Val	Asn	Glu	Asp	Phe	Ser	Leu	Cys	Pro
1				5					10					15	
Arg	Tyr	Pro	Arg	Ala	Val	Ile	Val	Pro	Tyr	Leu	Val	Asp	Asp	Asp	Ala
			20					25					30		
Leu	Ala	Arg	Ser	Ala	Arg	Phe	Arg	Gln	Gly	Gly	Arg	Phe	Pro	Val	Leu
			35				40					45			
Ser	Tyr	His	Pro	Ala	Pro	Ser	Gly	Arg	Gly	Ser	Ala	Pro	Ser	Pro	Arg
			50				55				60				
Ser	Ala	Pro	Gly	Trp	Leu	Arg	Pro	Phe	Trp	Ala	Phe	Ser	Phe	Trp	Pro
65					70					75					80
Gly	Gln	Phe	Ala	Ala											
					85										

<210> 3809

<211> 1221

<212> DNA

<213> Homo sapiens

<400> 3809

aaaacttttt tttttttttt tgttggtaca gattgtatat ttgcatgcct ggggggttacc
 60
 aggctgtacg catataaaca gggaggaggc aggctctgag aacctgccag ggtgcctggg
 120
 ataagctgtg actttttgcc cctgatgcca taagttggag ggtcctctgc tcaaaacata
 180
 tggtagacac ttctccttct ttcatctgg tatcatgtat catctctcag atccaataag
 240
 aaaacattcc cagtccttc cctccctccc tagtaccaag gtcctcatct cagttttcat
 300
 ggggccatgg agggctgcct ctagtgatga gctggaatct taaggcctga aatagagcca
 360
 gactgcagca gtcccaagtc ctggagagct tcaagtaact gctcccgcgc agagccaata
 420
 aaggaattct ccaggaaggt aggcaggcct cctacaccat cccgcagggt atacaggggc
 480
 actcgcacca ggcccagcac ctccagcccg tggtccttgg cgcgtgttgc gccggcctcc
 540
 acagccaaca gtcctcgag ctccagcgt tggcatagaa gtgccacaac gcgtggcctc
 600

gacccgacgt gggagctgcg gtagtcagtg cgctccacgc ggaaagcggc agccgcttcg
 660
 cccagctcct cgcgagctc gcgggttcagc ccgtcctcta ggcttctgtc ctgcgtgtcc
 720
 acgaatccgc cggggaagcc caggcgtcca tcgaagcgca tctgcatcag tatggcgtag
 780
 cgcagcggga tgcggccgaa gagcatccca ggggtccggcg cgtagaggag agcgtaggta
 840
 ctctgttttg ctaattctgt ctttaactctt cagctcagca agactactgg gctctctttg
 900
 gggtttccctt ctctgtgcta tgcctccaga caataagcta gggcacttca tttgtttcgt
 960
 ttctctcatg gttcactatc cagtgtgtcc tgttgtccaa tgcctgaaaa ccactgtttg
 1020
 gtacattttg tctggttttc tagttaaggc aggaggataa atctgttgcc tgtttttcca
 1080
 tcatggccag aagcaaaatc tgtatcatgt tctagtaatt ttcacaacta tcaaagttag
 1140
 tcttactaat cttttctcaa tacctaaagt tcaaaatctc ttttgtcaat ctgttatcaa
 1200
 gtactgttat ttttccttaa g
 1221

<210> 3810

<211> 97

<212> PRT

<213> Homo sapiens

<400> 3810

Ala	Gly	Ile	Leu	Arg	Pro	Glu	Ile	Glu	Pro	Asp	Cys	Ser	Ser	Pro	Lys
1				5					10					15	
Ser	Trp	Arg	Ala	Ser	Ser	Asn	Cys	Ser	Arg	Ala	Glu	Pro	Ile	Lys	Glu
			20					25					30		
Phe	Ser	Arg	Lys	Val	Gly	Arg	Pro	Pro	Thr	Pro	Ser	Arg	Arg	Val	Tyr
		35				40					45				
Arg	Gly	Thr	Arg	Thr	Arg	Pro	Ser	Thr	Ser	Ser	Pro	Trp	Ser	Leu	Ala
	50				55						60				
Arg	Val	Ala	Pro	Ala	Ser	Thr	Ala	Asn	Ser	Ser	Ser	Ser	Ser	Asp	Ala
65				70					75					80	
Trp	His	Arg	Ser	Ala	Thr	Thr	Arg	Gly	Pro	Asp	Pro	Thr	Trp	Glu	Leu
			85					90						95	

Arg

<210> 3811

<211> 296

<212> DNA

<213> Homo sapiens

<400> 3811

ggtaccctgg agatgggagc cagggtcgg tcaactgattg tgccccccac tgcccaggtt
 60
 cctgtcctta aggtcagaa ctgtagaccc tcaggcagac ccgttctccc ctaccagagg
 120

acaccacgcc agatatctgg gcagcagggga catctgacct ggggtgcttg ctggcagcac
 180
 tgcctggaca gcagggcctc cttagggcca cctcccaacc cagctaggga gcgtcttaag
 240
 gcctgcctc cctgctgggc ttgggtggga cgctcagggga caggccctc acgcgt
 296

<210> 3812
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 3812
 Met Gly Ala Arg Ala Arg Ser Leu Ile Val Pro Pro Thr Ala Gln Val
 1 5 10 15
 Pro Val Leu Lys ~~Ala~~ Gln Asn Cys Arg Pro Ser Gly Arg Pro Val Leu
 20 25 30
 Pro Tyr Gln Arg Thr Pro Arg Gln Ile Ser Gly Gln Gln Gly His Leu
 35 40 45
 Thr Trp Gly Ala Cys Trp Gln His Cys Leu Asp Ser Arg Ala Ser Leu
 50 55 60
 Gly Pro Pro Pro Asn Pro Ala Arg Glu Arg Leu Lys Ala Cys Pro Pro
 65 70 75 80
 Cys Trp Ala Trp Val Gly Arg Ser Gly Thr Gly Pro Ser Arg
 85 90

<210> 3813
 <211> 1419
 <212> DNA
 <213> Homo sapiens

<400> 3813
 agatctaagt ggtgggcccc ctctgagatg gtgactgtga gccccgagca aaacgaccgc
 60
 acccccttgg tgatggtgca tggttttggg ggcggcgtgg gtctctggat cctcaacatg
 120
 gactcactga gtgcccgcgc cacactgcac accttcgacg tgcttggtt cgggcgaagc
 180
 tcaaggccag cattcccaag ggacccggag ggggctgagg atgagtttgt gacatcgata
 240
 gagacatggc gggagaccat ggggatcccc agcatgatcc tcttggggca cagtttggga
 300
 ggattcctgg ccacttctta ctcaatcaag taccctgata gagttaaaca cctcatcctg
 360
 gtggacccat ggggctttcc cctccgacca actaaccoca gtgagatccg tgcaccccca
 420
 gcctgggtca aagccgtggc atctgtccta ggacgttcca atccattggc tgttcttcga
 480
 gtacctgggc cctggggggc tggctctggtg cagcgattcc ggccggactt caaacgcaag
 540
 tttgcagact tctttgaaga tgataccata tcagagtata tttaccactg caacgcacag
 600
 aatcccagtg gtgagacagc attcaaagcc atgatggagt cctttggctg ggcccggcgc
 660

cctatgctgg agcgaattca cttgattcga aaagatgtgc ctatcactat gatctacggg
 720
 tccgacacct ggatagatac cagtacggga aaaaagggtga agatgcagcg gccggattcc
 780
 tatgtccgag acatggagat taaggggtgcc tcccaccatg tctatgctga ccagccacac
 840
 atcttcaatg ctgtgggtgga ggagatctgc gactcagttg attgagctgc tctctgaaga
 900
 ggaagaggag aaagccagag agtcactctt acctccctgt ctgcttactc acccactctg
 960
 tcctttcctc accaactaac atgtgccagc caggcagagt cttgtactgt tcccagaaca
 1020
 ggacgacagt gaaaagaaca ctcttgaccc tacactgaag gctgaaggca gaagccacaa
 1080
 gaggccttga gtgccacccc caggggaagaa cataaagggt tgcacaatgc caccatcca
 1140
 ctcttgcca agtgttaccc agatgggtgga ggatgtgaag ggattgcacc aagccacatt
 1200
 cactctctct gtggcctttc ttcctctggg caaagaaggg cttccagtgg cctttcctca
 1260
 ctctgtagtg tttgtgggga taggttccat gcaagaacac cttcctcctc catccccac
 1320
 ttcaccccat cccataccag ttccatccag ggtctgctta actgccaaga gcaggtcctg
 1380
 gagttccctt cacctgcaga gtccttttca tgacctagg
 1419

<210> 3814

<211> 294

<212> PRT

<213> Homo sapiens

<400> 3814

Arg	Ser	Lys	Trp	Trp	Ala	Pro	Ser	Glu	Met	Val	Thr	Val	Ser	Pro	Glu
1			5					10						15	
Gln	Asn	Asp	Arg	Thr	Pro	Leu	Val	Met	Val	His	Gly	Phe	Gly	Gly	Gly
		20						25					30		
Val	Gly	Leu	Trp	Ile	Leu	Asn	Met	Asp	Ser	Leu	Ser	Ala	Arg	Arg	Thr
	35					40						45			
Leu	His	Thr	Phe	Asp	Leu	Leu	Gly	Phe	Gly	Arg	Ser	Ser	Arg	Pro	Ala
	50				55					60					
Phe	Pro	Arg	Asp	Pro	Glu	Gly	Ala	Glu	Asp	Glu	Phe	Val	Thr	Ser	Ile
65				70					75					80	
Glu	Thr	Trp	Arg	Glu	Thr	Met	Gly	Ile	Pro	Ser	Met	Ile	Leu	Leu	Gly
		85						90					95		
His	Ser	Leu	Gly	Phe	Leu	Ala	Thr	Ser	Tyr	Ser	Ile	Lys	Tyr	Pro	
		100				105						110			
Asp	Arg	Val	Lys	His	Leu	Ile	Leu	Val	Asp	Pro	Trp	Gly	Phe	Pro	Leu
	115					120					125				
Arg	Pro	Thr	Asn	Pro	Ser	Glu	Ile	Arg	Ala	Pro	Pro	Ala	Trp	Val	Lys
	130				135						140				
Ala	Val	Ala	Ser	Val	Leu	Gly	Arg	Ser	Asn	Pro	Leu	Ala	Val	Leu	Arg
145				150					155					160	
Val	Ala	Gly	Pro	Trp	Gly	Pro	Gly	Leu	Val	Gln	Arg	Phe	Arg	Pro	Asp

				165					170					175			
Phe	Lys	Arg	Lys	Phe	Ala	Asp	Phe	Phe	Glu	Asp	Asp	Thr	Ile	Ser	Glu		
			180					185					190				
Tyr	Ile	Tyr	His	Cys	Asn	Ala	Gln	Asn	Pro	Ser	Gly	Glu	Thr	Ala	Phe		
		195					200					205					
Lys	Ala	Met	Met	Glu	Ser	Phe	Gly	Trp	Ala	Arg	Arg	Pro	Met	Leu	Glu		
	210					215					220						
Arg	Ile	His	Leu	Ile	Arg	Lys	Asp	Val	Pro	Ile	Thr	Met	Ile	Tyr	Gly		
225					230					235					240		
Ser	Asp	Thr	Trp	Ile	Asp	Thr	Ser	Thr	Gly	Lys	Lys	Val	Lys	Met	Gln		
			245						250					255			
Arg	Pro	Asp	Ser	Tyr	Val	Arg	Asp	Met	Glu	Ile	Lys	Gly	Ala	Ser	His		
		260						265					270				
His	Val	Tyr	Ala	Asp	Gln	Pro	His	Ile	Phe	Asn	Ala	Val	Val	Glu	Glu		
	275						280						285				
Ile	Cys	Asp	Ser	Val	Asp												
	290																

<210> 3815

<211> 3669

<212> DNA

<213> Homo sapiens

<400> 3815

```

ngggagcagc tgcagccccg ccgcgcctc ccgggtccct tacgtctggc agctgccag
60
ctcggggccgg tctgaccggt ttgggccgcc acgcctggcg ctgtgctggg aggagccgcc
120
gccagtcgcy cggtcagtgc ctccctccag actcgggagg gtcgaggggg cgcgggagag
180
agcgcggggc gccgcgggg ctggtcgct gcagggatgg gggacgagcg gcccactac
240
tacgggaaac acggaacgcc acagaagtat gatcccaactt tcaaaggacc catttacaat
300
aggggctgca cggatatcat atgctgtgtg ttcctgctcc tggccattgt gggctacgtg
360
gctgtaggca tcatagcctg gactcatgga gaccctcgaa aggtgatcta cccactgat
420
agccggggcg agttctgcgg gcagaagggc acaaaaaacg agaacaaacc ctatctgttt
480
tatttcaaca ttgtgaaatg tgccagcccc ctggttctgc tggaattcca atgtccact
540
ccccagatct gcgtggaaaa atgccccgac cgctacctca cgtacctgaa tgctcgagc
600
tcccgggact ttgagtacta taagcagttc tgtgttcctg gcttcaagaa caataaagga
660
gtggctgagg tgcttcgaga tgggtactgc cctgctgtcc tcatccccag caaaccttg
720
gcccggagat gcttccccgc tatccacgcc tacaaggggt tctgatggt gggcaatgag
780
acgacctatg aggatgggca tggctcccg aaaaacatca cagacctggt ggagggcgcc
840
aagaaagcca atggagtctt agaggcgcg caactcgcca tgcgcatatt tgaagattac
900

```

accgtctctt ggtactggat tatcatagga ctggtcattg ccatggcgat gagcctcctg
960
ttcatcatcc tgcttcgctt cctggctggg attatgggtt gggatgatgat catcatgggt
1020
attctgggtg tgggctacgg aatatttcac tgctacatgg agtactcccg actgcgtggg
1080
gaggccggct ctgatgtctc tttgggtggac ctccgctttc agacggattt ccgggtgtac
1140
ctgcacttac ggcagacctg gttggccttt atgatcattc tgagtatcct tgaagtcatt
1200
atcatcttgc tgctcatctt tctccggaag agaattctca tcgcgattgc actcatcaaa
1260
gaagccagca gggctgtggg atacgtcatg tgctccttgc tctaccact ggtcaccttc
1320
ttcttgctgt gcctctgcat cgctactgg gccagcactg ctgtcttctt gtccacttcc
1380
aacgaagcgg tctataagat ctttgatgac agccctgcc cantttactg cgaaaacctg
1440
nncaaccag agacctccc ctctccaat gaggccgcc aatgcccga tgcccggttg
1500
cagttgcct tctacggtg tgagtcgggc taccaccggg cctgctggg cctgcagatc
1560
ttcaatgct tcatgttctt ctggttggcc aacttcgtgc tggcgctggg ccaggtcacg
1620
ctggccgggg cttttgctc ctactactgg gccctgcgca agccggacga cctgccggcc
1680
ttcccgctct tctctgcctt tggccggggc ctccaggtacc acacaggctc cctggccttt
1740
ggcgcgctca tcttgccat tgtgcagatc atccgtgtga tactcgagta cctggatcag
1800
cggctgaaag ctgcagagaa caagtttgcc aagtgcctca tgacctgtct caaatgctgc
1860
ttctgggtgcc tggagaagtt catcaaattc cttaatagga atgcctacat catgattgcc
1920
atctacggca ccaatttctg cacctcggcc aggaatgcct tcttctgtct catgagaaac
1980
atcatcagag tggtgtcct ggataaagtt actgacttcc tcttctgtt gggcaaactt
2040
ctgatcgttg gtagtggtgg gatcctggct ttcttcttct tccccaccg tatcaggatc
2100
gtgcaggata cagcaccacc cctcaattat tactgggttc ctatactgac ggtgatcgtt
2160
ggctcctact tgattgcaca cggtttcttc agcgtctatg gcatgtgtgt ggacacgctg
2220
ttctctgtct tcttgagga cctggagagg aatgacggct cggccgagag gccttacttc
2280
atgtcttcca cctcaagaa actcttgaac aagaccaaca agaaggcagc ggagtctga
2340
aggccccgtg ctccccacct ctcaaggagt ctcatgccgc aggggtgctca gtagctgggt
2400
ctgttcccc agccccttg gctcacctga agtcctatca ctgccgtctt gccctcccc
2460
atgagccaga tcccaccagt ttctggacgt ggagagtctg gggcatctcc ttcttatgcc
2520

aaggggcgct tggagttttc atggctgccc ctccagactg cgagaaacaa gtaaaaaccc
 2580
 attggggcct cttgatgtct gggatggcac gtggcccgac ctccacaagc tccctcatgc
 2640
 ttctgtccc ccgcttacac gacaacgggc cagaccacgg gaaggacggt gtttgtgtct
 2700
 gagggagctg ctggccacag tgaacaccca cgtttattcc tgctgtctcc ggccaggact
 2760
 gaaccccttc tccacacctg aacagtggc tcaagggcca ccagaagcat ttctttatta
 2820
 ttattatttt ttaacctgga catgcattaa agggctctatt agctttcttt ccgtctgtct
 2880
 caacagctga gatggggccg ccaaggagtg ccttcctttt gctccctcct agctgggagt
 2940
 gacgggtggg agtgtgtgtg cccagggtggg ggtgtctcct ggctgggaag gagggaaagg
 3000
 gagggagagt tttgcggggg ttggcagtgg agagcaggct ggagaggaga tggctaatag
 3060
 ctgtttaatg gaaacctgct gggctggagg gagttaggct gaatttcccg acttctctg
 3120
 ccagttattg acacagctct ctttgtaaga gaggaagaa actaaaccca cccaagggat
 3180
 gatttcaggg ggagaggtgg agggcagatg tcctgggcaa accgggcccc tctgccaca
 3240
 cacctcactt gatccttttg ccaaacttgt caaactcagg ggaactggct tcccagttgc
 3300
 ccttttgcca tattccaagt cccctcaga cttcatgtct ctgctcatca gcactgtccc
 3360
 aggatcctgg agagggagaa cccctggccc caggggaaag aggggggggt ctcccgttc
 3420
 ctgtgcctgc accagccctg ccccatgtgc gtctgcacac cctgcgtgt aactgcattc
 3480
 caaccactaa taaagtgcct attgtacagg tccaggcctg gtgtgtttgt tgggggcagt
 3540
 gagccagtgg cggctggtag ggggaacccc agcttccaag gccctaggag tctctgaact
 3600
 agggcgattc tctcaaaggg aacgaggagg gggcaggaaa cccactggct gctggctctg
 3660
 cctgaattc
 3669

<210> 3816

<211> 707

<212> PRT

<213> Homo sapiens

<400> 3816

Met	Gly	Asp	Glu	Arg	Pro	His	Tyr	Tyr	Gly	Lys	His	Gly	Thr	Pro	Gln
1				5					10					15	
Lys	Tyr	Asp	Pro	Thr	Phe	Lys	Gly	Pro	Ile	Tyr	Asn	Arg	Gly	Cys	Thr
			20					25					30		
Asp	Ile	Ile	Cys	Cys	Val	Phe	Leu	Leu	Leu	Ala	Ile	Val	Gly	Tyr	Val
		35					40					45			
Ala	Val	Gly	Ile	Ile	Ala	Trp	Thr	His	Gly	Asp	Pro	Arg	Lys	Val	Ile

50					55					60					
Tyr	Pro	Thr	Asp	Ser	Arg	Gly	Glu	Phe	Cys	Gly	Gln	Lys	Gly	Thr	Lys
65					70					75					80
Asn	Glu	Asn	Lys	Pro	Tyr	Leu	Phe	Tyr	Phe	Asn	Ile	Val	Lys	Cys	Ala
				85					90					95	
Ser	Pro	Leu	Val	Leu	Leu	Glu	Phe	Gln	Cys	Pro	Thr	Pro	Gln	Ile	Cys
			100					105					110		
Val	Glu	Lys	Cys	Pro	Asp	Arg	Tyr	Leu	Thr	Tyr	Leu	Asn	Ala	Arg	Ser
		115					120					125			
Ser	Arg	Asp	Phe	Glu	Tyr	Tyr	Lys	Gln	Phe	Cys	Val	Pro	Gly	Phe	Lys
	130					135					140				
Asn	Asn	Lys	Gly	Val	Ala	Glu	Val	Leu	Arg	Asp	Gly	Asp	Cys	Pro	Ala
145					150					155					160
Val	Leu	Ile	Pro	Ser	Lys	Pro	Leu	Ala	Arg	Arg	Cys	Phe	Pro	Ala	Ile
				165					170						175
His	Ala	Tyr	Lys	Gly	Val	Leu	Met	Val	Gly	Asn	Glu	Thr	Thr	Tyr	Glu
		180						185					190		
Asp	Gly	His	Gly	Ser	Arg	Lys	Asn	Ile	Thr	Asp	Leu	Val	Glu	Gly	Ala
	195					200						205			
Lys	Lys	Ala	Asn	Gly	Val	Leu	Glu	Ala	Arg	Gln	Leu	Ala	Met	Arg	Ile
	210					215					220				
Phe	Glu	Asp	Tyr	Thr	Val	Ser	Trp	Tyr	Trp	Ile	Ile	Ile	Gly	Leu	Val
225					230					235					240
Ile	Ala	Met	Ala	Met	Ser	Leu	Leu	Phe	Ile	Ile	Leu	Leu	Arg	Phe	Leu
				245					250					255	
Ala	Gly	Ile	Met	Val	Trp	Val	Met	Ile	Ile	Met	Val	Ile	Leu	Val	Leu
			260					265					270		
Gly	Tyr	Gly	Ile	Phe	His	Cys	Tyr	Met	Glu	Tyr	Ser	Arg	Leu	Arg	Gly
	275						280					285			
Glu	Ala	Gly	Ser	Asp	Val	Ser	Leu	Val	Asp	Leu	Gly	Phe	Gln	Thr	Asp
	290					295					300				
Phe	Arg	Val	Tyr	Leu	His	Leu	Arg	Gln	Thr	Trp	Leu	Ala	Phe	Met	Ile
305					310					315					320
Ile	Leu	Ser	Ile	Leu	Glu	Val	Ile	Ile	Ile	Leu	Leu	Leu	Ile	Phe	Leu
				325					330					335	
Arg	Lys	Arg	Ile	Leu	Ile	Ala	Ile	Ala	Leu	Ile	Lys	Glu	Ala	Ser	Arg
			340					345					350		
Ala	Val	Gly	Tyr	Val	Met	Cys	Ser	Leu	Leu	Tyr	Pro	Leu	Val	Thr	Phe
	355						360					365			
Phe	Leu	Leu	Cys	Leu	Cys	Ile	Ala	Tyr	Trp	Ala	Ser	Thr	Ala	Val	Phe
	370					375					380				
Leu	Ser	Thr	Ser	Asn	Glu	Ala	Val	Tyr	Lys	Ile	Phe	Asp	Asp	Ser	Pro
385					390					395					400
Cys	Pro	Xaa	Tyr	Cys	Glu	Asn	Leu	Xaa	Asn	Pro	Glu	Thr	Phe	Pro	Ser
				405					410					415	
Ser	Asn	Glu	Ser	Arg	Gln	Cys	Pro	Asn	Ala	Arg	Cys	Gln	Phe	Ala	Phe
			420					425					430		
Tyr	Gly	Gly	Glu	Ser	Gly	Tyr	His	Arg	Ala	Leu	Leu	Gly	Leu	Gln	Ile
	435					440						445			
Phe	Asn	Ala	Phe	Met	Phe	Phe	Trp	Leu	Ala	Asn	Phe	Val	Leu	Ala	Leu
	450					455					460				
Gly	Gln	Val	Thr	Leu	Ala	Gly	Ala	Phe	Ala	Ser	Tyr	Tyr	Trp	Ala	Leu
465					470					475					480
Arg	Lys	Pro	Asp	Asp	Leu	Pro	Ala	Phe	Pro	Leu	Phe	Ser	Ala	Phe	Gly

				485					490					495	
Arg	Ala	Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile
			500					505					510		
Leu	Ala	Ile	Val	Gln	Ile	Ile	Arg	Val	Ile	Leu	Glu	Tyr	Leu	Asp	Gln
		515					520					525			
Arg	Leu	Lys	Ala	Ala	Glu	Asn	Lys	Phe	Ala	Lys	Cys	Leu	Met	Thr	Cys
		530				535					540				
Leu	Lys	Cys	Cys	Phe	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	Leu	Asn
545					550				555					560	
Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Thr	Asn	Phe	Cys	Thr
			565					570						575	
Ser	Ala	Arg	Asn	Ala	Phe	Phe	Leu	Leu	Met	Arg	Asn	Ile	Ile	Arg	Val
			580					585					590		
Ala	Val	Leu	Asp	Lys	Val	Thr	Asp	Phe	Leu	Phe	Leu	Leu	Gly	Lys	Leu
		595					600					605			
Leu	Ile	Val	Gly	Ser	Val	Gly	Ile	Leu	Ala	Phe	Phe	Phe	Phe	Thr	His
	610					615					620				
Arg	Ile	Arg	Ile	Val	Gln	Asp	Thr	Ala	Pro	Pro	Leu	Asn	Tyr	Tyr	Trp
625					630				635					640	
Val	Pro	Ile	Leu	Thr	Val	Ile	Val	Gly	Ser	Tyr	Leu	Ile	Ala	His	Gly
			645					650						655	
Phe	Phe	Ser	Val	Tyr	Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe
			660				665						670		
Leu	Glu	Asp	Leu	Glu	Arg	Asn	Asp	Gly	Ser	Ala	Glu	Arg	Pro	Tyr	Phe
		675				680					685				
Met	Ser	Ser	Thr	Leu	Lys	Lys	Leu	Leu	Asn	Lys	Thr	Asn	Lys	Lys	Ala
	690					695					700				
Ala	Glu	Ser													
705															

<210> 3817

<211> 419

<212> DNA

<213> Homo sapiens

<400> 3817

cgcggtgttac acaactggga ctttgagcct cgaaagggttt ctgctgcag catgcgctac
 60
 ctggcgctga tgggtgtctcg gcccgctactc aggtccggg agatcaaccc totgtgttc
 120
 agctacgtgg aggagctggt ggagattcgc aagctgcgcc aggacatcct gctcatgaag
 180
 ccgtacttca tcacctgcag ggaggccatg gaggtcgtc tgctgtgca ggacctctg
 240
 gacgtgcatg ccggccgcct gggctgctcg ctcaccgaga tccacacgct cttcgccaag
 300
 cacatcaagc tggactgcga gcggtgccag gccaaagggt tcgtgtgtga gctctgcaga
 360
 gagggcgacg tgctgttccc gttcgacagc cacacgtctg tgtgcgccga ctgcttcgc
 419

<210> 3818

<211> 139

<212> PRT

<213> Homo sapiens

<400> 3818

```

Arg Val Val His Asn Trp Asp Phe Glu Pro Arg Lys Val Ser Arg Cys
 1           5           10           15
Ser Met Arg Tyr Leu Ala Leu Met Val Ser Arg Pro Val Leu Arg Leu
      20           25           30
Arg Glu Ile Asn Pro Leu Leu Phe Ser Tyr Val Glu Glu Leu Val Glu
      35           40           45
Ile Arg Lys Leu Arg Gln Asp Ile Leu Leu Met Lys Pro Tyr Phe Ile
      50           55           60
Thr Cys Arg Glu Ala Met Glu Ala Arg Leu Leu Leu Gln Asp Leu Leu
 65           70           75           80
Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His Thr
      85           90           95
Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala Lys
      100          105          110
Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro Phe
      115          120          125
Asp Ser His Thr Ser Val Cys Ala Asp Cys Phe
      130          135

```

<210> 3819

<211> 1731

<212> DNA

<213> Homo sapiens

<400> 3819

```

actcctcccc ctccaggaat gttcatttgt ttggagcctt gggcatccat ctcacagggg
 60
agtttgacat ctctactcc cagagcttcg ctcttatatt tcttcacaaa ctgtccatc
 120
tccttcacct ctctgggaga caactcatgg cactttgaag ggtcctggtc atgtgcaggg
 180
agctgctttg ccagctgctt cttccggtac tgtgccccct ctgagcctgc tactgggcgg
 240
cggaagttcg acggcgccgg gcgagtggct gttgagcggc gccgcgggag ttccgcaggc
 300
ttcccgtggt cgcagcggag ccggaggcca gctgaaccgg gccgtgggat cacggatagg
 360
aggaggaggg gacccatagg acgcgttaac atggacctgg aaaacaaagt gaagaagatg
 420
ggcttaggtc acgagcaagg atttggagcc cttgttttaa aatgcaaaga aaaatgtgaa
 480
ggattcgaac tgcacttctg gagaaaaata tgtcgtaact gcaagtgtgg ccaagaagag
 540
catgatgtcc tcttgagcaa tgaagaggat cgaaaagtgg gaaaactttt tgaagacacc
 600
aagtatacca ctctgattgc aaaactaaag tcagatggaa ttcccatgta taaacgcaat
 660
gttatgatat tgacgaatcc agttgctgcc aagaagaatg tctccatcaa tacagttacc
 720
tatgagtggg ctctcctgtt ccagaatcaa gcattggcca ggcagtacat gcagatgcta
 780

```

cccaaggaaa agcagccagt agcaggctca gagggggcac agtaccggaa gaagcagctg
 840
 gcaaagcagc tccctgcaca tgaccaggac ccttcaaagt gccatgagtt gtctcccaga
 900
 gaggtgaagg agatggagca gtttgtgaag aaatataaga gcgaagctct gggagtagga
 960
 gatgtcaaac ttccctgtga gatggatgcc caaggcccca aacaaatgaa cattcctgga
 1020
 ggggatagaa gcaccccgagc agcagtgggg gccatggagg acaaactctgc tgagcacaaa
 1080
 agaactcaat attcctgcta ttgctgcaaa ctgagtatga aagaaggatga cccagccatc
 1140
 tatgccgaaa gggctggcta tgataaactg tggcaccag cttgttttgc ctgcagcacc
 1200
 tgccatgaac tcctgggtga catgatttat ttttggaaga atgagaagct atactgtggc
 1260
 agacattact gtgacagcga gaaaccccgat tgtgctggct gtgacgagct gatattcagc
 1320
 aatgagtata cccaggcaga aaaccagaat tggcacctga aacacttctg ctgctttgac
 1380
 tgtgatagca ttctagctgg ggagatatac gtgatgggtca atgacaagcc cgtgtgcaag
 1440
 ccctgctatg tgaagaatca cgctgtgggtg agaagtgttc taaggatatg gttgcctcag
 1500
 cctgcttttag gacttgagtt tatgcttttc ttaaagcctc ttacaaatgg gaaacagaaa
 1560
 gcagtccctc taagtagaaa gcaaattatt cctaccacag ggtgttaaaa tcaaggcaat
 1620
 tcaaaaacaa tacatgcatt gactatgagc cacctcaaga tttctacttg tgaaatttac
 1680
 aatatcaatt ataggtactg cttaataata aaatcctcac ttaaaaaaaaa a
 1731

<210> 3820

<211> 535

<212> PRT

<213> Homo sapiens

<400> 3820

Thr	Pro	Pro	Pro	Gly	Met	Phe	Ile	Cys	Leu	Glu	Pro	Trp	Ala	Ser
1			5					10					15	
Ile	Ser	Gln	Gly	Ser	Leu	Thr	Ser	Pro	Thr	Pro	Arg	Ala	Ser	Leu
		20					25				30			
Tyr	Phe	Phe	Thr	Asn	Cys	Ser	Ile	Ser	Phe	Thr	Ser	Leu	Gly	Asp
	35				40				45					
Ser	Trp	His	Phe	Glu	Gly	Ser	Trp	Ser	Cys	Ala	Gly	Ser	Cys	Phe
	50				55				60					
Ser	Cys	Phe	Phe	Arg	Tyr	Cys	Ala	Pro	Ser	Glu	Pro	Ala	Thr	Gly
65				70					75				80	
Arg	Lys	Phe	Asp	Gly	Ala	Gly	Arg	Val	Ala	Val	Glu	Arg	Arg	Arg
			85				90					95		
Ser	Ser	Ala	Gly	Phe	Pro	Cys	Ser	Gln	Arg	Ser	Arg	Arg	Pro	Ala
		100					105					110		
Pro	Gly	Arg	Gly	Ile	Thr	Asp	Arg	Arg	Arg	Gly	Pro	Ile	Gly	Arg

115	120	125
Val Asn Met Asp Leu Glu Asn Lys Val Lys Lys Met Gly Leu Gly His		
130	135	140
Glu Gln Gly Phe Gly Ala Pro Cys Leu Lys Cys Lys Glu Lys Cys Glu		
145	150	155
Gly Phe Glu Leu His Phe Trp Arg Lys Ile Cys Arg Asn Cys Lys Cys		
165	170	175
Gly Gln Glu Glu His Asp Val Leu Leu Ser Asn Glu Glu Asp Arg Lys		
180	185	190
Val Gly Lys Leu Phe Glu Asp Thr Lys Tyr Thr Thr Leu Ile Ala Lys		
195	200	205
Leu Lys Ser Asp Gly Ile Pro Met Tyr Lys Arg Asn Val Met Ile Leu		
210	215	220
Thr Asn Pro Val Ala Ala Lys Lys Asn Val Ser Ile Asn Thr Val Thr		
225	230	235
Tyr Glu Trp Ala Pro Val Gln Asn Gln Ala Leu Ala Arg Gln Tyr		
245	250	255
Met Gln Met Leu Pro Lys Glu Lys Gln Pro Val Ala Gly Ser Glu Gly		
260	265	270
Ala Gln Tyr Arg Lys Lys Gln Leu Ala Lys Gln Leu Pro Ala His Asp		
275	280	285
Gln Asp Pro Ser Lys Cys His Glu Leu Ser Pro Arg Glu Val Lys Glu		
290	295	300
Met Glu Gln Phe Val Lys Lys Tyr Lys Ser Glu Ala Leu Gly Val Gly		
305	310	315
Asp Val Lys Leu Pro Cys Glu Met Asp Ala Gln Gly Pro Lys Gln Met		
325	330	335
Asn Ile Pro Gly Gly Asp Arg Ser Thr Pro Ala Ala Val Gly Ala Met		
340	345	350
Glu Asp Lys Ser Ala Glu His Lys Arg Thr Gln Tyr Ser Cys Tyr Cys		
355	360	365
Cys Lys Leu Ser Met Lys Glu Gly Asp Pro Ala Ile Tyr Ala Glu Arg		
370	375	380
Ala Gly Tyr Asp Lys Leu Trp His Pro Ala Cys Phe Val Cys Ser Thr		
385	390	395
Cys His Glu Leu Leu Val Asp Met Ile Tyr Phe Trp Lys Asn Glu Lys		
405	410	415
Leu Tyr Cys Gly Arg His Tyr Cys Asp Ser Glu Lys Pro Arg Cys Ala		
420	425	430
Gly Cys Asp Glu Leu Ile Phe Ser Asn Glu Tyr Thr Gln Ala Glu Asn		
435	440	445
Gln Asn Trp His Leu Lys His Phe Cys Cys Phe Asp Cys Asp Ser Ile		
450	455	460
Leu Ala Gly Glu Ile Tyr Val Met Val Asn Asp Lys Pro Val Cys Lys		
465	470	475
Pro Cys Tyr Val Lys Asn His Ala Val Val Arg Ser Val Leu Arg Ile		
485	490	495
Trp Leu Pro Gln Pro Ala Leu Gly Leu Glu Phe Met Leu Phe Leu Lys		
500	505	510
Pro Leu Thr Asn Gly Lys Gln Lys Ala Val Leu Leu Ser Arg Lys Gln		
515	520	525
Ile Ile Pro Thr Thr Gly Cys		
530	535	

<210> 3821
<211> 5212
<212> DNA
<213> Homo sapiens

<400> 3821
nnggtataact ttgttttgc tttgtttcaca atttgggttta ataagagtga tttcatttac
60
ctcaagtgc atttcttcat aatgctgtgt aatgctaaag ctttgattat gtgcgtgtgt
120
ggtttttttc tccaataggc aattatttcc agtcagagaa ggaaaccagt gcctggcatt
180
ctcaccatct ttctacctac catgatcaag tgcttgtcag ttgaagtaca agccaaattg
240
cgttctgggt tggccataag ctcttgggc caatgtgttg aggaacttgc cctcaacagt
300
attgatgctg aagcaaatg tgtggctgtc aggggtgaata tggaaacctt ccaagttcaa
360
gtgatagaca atggatttgg gatggggagt gatgatgtag agaaagtggg aaatcgttat
420
ttcaccagta aatgccactc ggtacaggac ttggagaatc caaggtttta tggtttccga
480
ggagaggcct tggcaaatat tgctgacatg gccagtgcgtg tggaaatttc gtccaagaaa
540
aacaggacaa tgaaaacttt tgtgaaactg tttcagagtg gaaaagccct gaaagcttgt
600
gaagctgatg tgactagagc aagcgctggg actactgtaa cagtgtataa cctattttac
660
cagcttctcg taaggaggaa atgcatggac cctagactgg agtttgagaa ggtaggcag
720
agaatagaag ctctctcact catgcacct tccatttctt tctctttgag aaatgatgtt
780
tctggttcca tggttcttca gctccctaaa accaaagacg tatgttcccg attttgtcaa
840
atztatggat tgggaaagtc ccaaaagcta agagaaataa gttttaaata taaagagttt
900
gagcttagtg gctatatcag ctctgaagca cattacaaca agaatatgca gtttttgttt
960
gtgaacaaaa gactagtttt aaggacaaag ctacataaac tcattgactt tttattaagg
1020
aaagaaagta ttatatgcaa gccaaagaat ggtcccacca gtaggcaaat gaattcaagt
1080
cttcggcacc ggtctacccc agaactctat ggcatatatg taattaatgt gcagtgccaa
1140
ttctgtgagt atgatgtgtg catggagcca gccaaaactc tgattgaatt tcagaactgg
1200
gacactctct tgttttgcac tcaggaagga gtgaaaatgt ttttaaagca agaaaaatta
1260
tttgtggaat tatcagggtga ggatattaag gaatttagtg aagataatgg ttttagttta
1320
tttgatgcta ctcttcagaa gcgtgtgact tccgatgaga ggagcaattt ccaggaagca
1380
tgtaataata ttttagattc ctatgagatg ttttaatttc agtcaaaagc tgtgaaaaga
1440

aaaactactg cagaaaacgt aaacacacag agttctaggg attcagaagc taccagaaaa
1500
aatacaaatg atgcattttt gtacatttat gaatcagggtg gtccaggcca tagcaaaatg
1560
acagagccat ctttacaaaa caaagacagc tcttgctcag aatcaaagat gttagaacaa
1620
gagacaattg tagcatcaga agctggagaa aatgagaaac ataaaaaatc tttcctggaa
1680
catagctctt tagaaaatcc gtgtggaacc agtttagaaa tgtttttaag cccttttcag
1740
acaccatgtc actttgagga gagtgggcag gatctagaaa tatggaaaga aagtactact
1800
gttaatggca tggctgcca catcttgaaa aataatagaa ttcagaatca accaaagaga
1860
tttaaagatg ctactgaagt gggatgccag cctctgcctt ttgcaacaac attatgggga
1920
gtacatagtg ctacagacaga gaaagagaaa aaaaaagaat ctagcaattg tggaagaaga
1980
aatgttttta gttatgggag agttaaatta tgttccactg gctttataac tcatgtagta
2040
caaatgaaa aaactaaatc aactgaaaca gaacattcat ttaaaaatta tgttagacct
2100
gggccacac gtgccaaga aacatttgga aatagaacac gtcattcagt tgaaactcca
2160
gacatcaaag atttagccag cactttaagt aaagaatctg gtcaattgcc caacaaaaaa
2220
aattgcagaa cgaatataag ttatgggcta gagaatgaac ctacagcaac ttatacaatg
2280
ttttctgctt ttcaggaagg tagcaaaaaa tcacaaacag attgcatatt atctgatata
2340
tccccctctt tccccggta tagacacgtt tccaatgata gtaggaaaac agataaatta
2400
attggtttct ccaaaccaat cgtccgtaag aagctaagct tgagttcaca gctaggatct
2460
ttagagaagt ttaagaggca atatgggaag gttgaaaatc ctctggatac agaagtagag
2520
gaaagtaatg gagtcactac caatctcagt cttcaagttg aacctgacat tctgctgaag
2580
gacaagaacc gcttagagaa ctctgatgtt tgtaaaatca ctactatgga gcatagtgat
2640
tcagatagta gttgtcaacc agcaagccac atccttgact cagagaagtt tccattctcc
2700
aaggatgaag attgttttaga acaacagatg cctagtttga gagaaagtcc tatgaccctg
2760
aaggagttat ctctctttaa tagaaaacct ttggaccttg agaagtcac tgaatcacta
2820
gcctctaaat tatccagact gaagggttcc gaaagagaaa ctcaaacaat ggggatgatg
2880
agtcgtttta atgaacttcc aaattcagat tccagtagga aagacagcaa gttgtgcagt
2940
gtgttaacac aagatTTTTTg tatgttattt aacaacaagc atgaaaaaac agagaatggg
3000
gtcatcccaa catcagattc tgccacacag gataattcct ttaataaaaa tagtaaaaca
3060

cattctaaca gcaataacaac agagaactgt gtgatatcag aaactccttt ggtattgccc
3120
tataataatt ctaaagttac cggtaaagat tcagatgttc ttatcagagc ctcagaacaa
3180
cagataggaa gtcttgactc tcccagtgga atgttaatga atccggtaga agatgccaca
3240
ggtgacaaaa atggaatttg ttttcagagt gaggaatcta aagcaagagc ttgttctgaa
3300
actgaagagt caaacacgtg ttgttcagat tggcagcggc atttcgatgt agccctggga
3360
agaatggttt atgtcaacaa aatgactgga ctcagcacat tcattgcccc aactgaggac
3420
attcaggctg cttgtactaa agacctgaca actgtggctg tggatgttgt acttgagaat
3480
gggtctcagt acaggtgtca acctttttaga agcgacctg ttcttccttt ccttccgaga
3540
gctcagcag agaggactgt gatgagacag gataacagag atactgtgga tgatactgtt
3600
agtagcgaat cgcttcagtc tttgttctca gaatgggaca atccagtatt tgcccgttat
3660
ccagaggttg ctgttgatgt aagcagtggc caggctgaga gcttagcagt taaaattcac
3720
aacatcttgt atccctatcg tttcaccaaa ggaatgattc attcaatgca ggttctccag
3780
caagtagata acaagtttat tgctgtttg atgagcacta agactgaaga gaatggcgag
3840
gcagattcct acgagaagca acaggcacia ggctctggtc ggaaaaaatt actgtcttct
3900
actctaattc ctccgctaga gataacagtg acagaggaac aaaggagact cttatggtgt
3960
taccacaaaa atctggaaga tctgggcctt gaatttgtat ttccagacac tagtgattct
4020
ctggctcctg tgggaaaagt accactatgt tttgtggaaa gagaagccaa tgaacttcgg
4080
agaggaagat ctactgtgac caagagtatt gtggaggaat ttatccgaga acaactggag
4140
ctactccaga ccaccggagg catccaaggg acattgccac tgactgtcca gaaggtgttg
4200
gcatcccaag cctgccatgg ggccattaag tttaatgatg gcctgagctt acaggaaagt
4260
tgccgcctta ttgaagctct gtccctcatgc cagctgccat tccagtgtgc tcacgggaga
4320
ccttctatgc tgccgttagc tgacatagac cacttggaaac aggaaaaaca gattaaacc
4380
aacctcacta aacttcgcaa aatggcccag gcctggcgtc tctttggaaa agcagagtgt
4440
gatacaaggc agagcctgca gcagtccatg cctccctgtg agccaccatg agaacagaat
4500
cactggctta aaaggaacaa agggatgttc actgtatgcc tctgagcaga gacgagcagc
4560
agcaggtacc agcacggccc tgactgaatc agcccagtgt ccctgagcag cttagacagc
4620
agggtctct gtatcagctt ttcttgagca gatgattccc ctagttgagt agccagatga
4680

aattcaagcc taaagacaat tcattcattt gcatccatgg gcacagaagg ttgctatata
4740
gtatctacct ttgctactt atttaatgat aaaatttaat gacagtttga aaaaaaaaaa
4800
aaaaaaaaatt atttgaaggg gtgggtgatt ttgtttttg tacagttttt tttcaagctt
4860
cacatttgcg tgtatctaatt tcagctgatg ctcaagtcca aggggtagtc tgccttccca
4920
ggctgcccc agggtttctg cactgggtccc ctcttttccc ttcagtcttc ttcacttccc
4980
tatgctgctg cttcatgtgc tacatctcag acttaaagag tttctctact acagtgaaaa
5040
cattctctag ggtctttcat caggccttta gttatttttag ggataaaaac tattgataaa
5100
aaggacaagg atagaacaga gaaaatttaa agtcctgttc cgggtttttt gttatgtttt
5160
ctttaaaaac tcagagactg atgttcaata tcccaaacca gtaaaatggg ga
5212

<210> 3822

<211> 375

<212> PRT

<213> Homo sapiens

<400> 3822

Met	Val	Tyr	Val	Asn	Lys	Met	Thr	Gly	Leu	Ser	Thr	Phe	Ile	Ala	Pro
1				5					10					15	
Thr	Glu	Asp	Ile	Gln	Ala	Ala	Cys	Thr	Lys	Asp	Leu	Thr	Thr	Val	Ala
			20					25					30		
Val	Asp	Val	Val	Leu	Glu	Asn	Gly	Ser	Gln	Tyr	Arg	Cys	Gln	Pro	Phe
			35				40					45			
Arg	Ser	Asp	Leu	Val	Leu	Pro	Phe	Leu	Pro	Arg	Ala	Arg	Ala	Glu	Arg
			50			55					60				
Thr	Val	Met	Arg	Gln	Asp	Asn	Arg	Asp	Thr	Val	Asp	Asp	Thr	Val	Ser
65					70					75				80	
Ser	Glu	Ser	Leu	Gln	Ser	Leu	Phe	Ser	Glu	Trp	Asp	Asn	Pro	Val	Phe
				85					90					95	
Ala	Arg	Tyr	Pro	Glu	Val	Ala	Val	Asp	Val	Ser	Ser	Gly	Gln	Ala	Glu
			100					105					110		
Ser	Leu	Ala	Val	Lys	Ile	His	Asn	Ile	Leu	Tyr	Pro	Tyr	Arg	Phe	Thr
			115				120					125			
Lys	Gly	Met	Ile	His	Ser	Met	Gln	Val	Leu	Gln	Gln	Val	Asp	Asn	Lys
			130				135				140				
Phe	Ile	Ala	Cys	Leu	Met	Ser	Thr	Lys	Thr	Glu	Glu	Asn	Gly	Glu	Ala
145					150					155					160
Asp	Ser	Tyr	Glu	Lys	Gln	Gln	Ala	Gln	Gly	Ser	Gly	Arg	Lys	Lys	Leu
			165						170					175	
Leu	Ser	Ser	Thr	Leu	Ile	Pro	Pro	Leu	Glu	Ile	Thr	Val	Thr	Glu	Glu
			180					185						190	
Gln	Arg	Arg	Leu	Leu	Trp	Cys	Tyr	His	Lys	Asn	Leu	Glu	Asp	Leu	Gly
			195				200					205			
Leu	Glu	Phe	Val	Phe	Pro	Asp	Thr	Ser	Asp	Ser	Leu	Val	Leu	Val	Gly
			210				215					220			
Lys	Val	Pro	Leu	Cys	Phe	Val	Glu	Arg	Glu	Ala	Asn	Glu	Leu	Arg	Arg

225					230					235					240	
Gly	Arg	Ser	Thr	Val	Thr	Lys	Ser	Ile	Val	Glu	Glu	Phe	Ile	Arg	Glu	
				245					250					255		
Gln	Leu	Glu	Leu	Leu	Gln	Thr	Thr	Gly	Gly	Ile	Gln	Gly	Thr	Leu	Pro	
				260					265					270		
Leu	Thr	Val	Gln	Lys	Val	Leu	Ala	Ser	Gln	Ala	Cys	His	Gly	Ala	Ile	
				275					280					285		
Lys	Phe	Asn	Asp	Gly	Leu	Ser	Leu	Gln	Glu	Ser	Cys	Arg	Leu	Ile	Glu	
				290					295					300		
Ala	Leu	Ser	Ser	Cys	Gln	Leu	Pro	Phe	Gln	Cys	Ala	His	Gly	Arg	Pro	
305					310					315					320	
Ser	Met	Leu	Pro	Leu	Ala	Asp	Ile	Asp	His	Leu	Glu	Gln	Glu	Lys	Gln	
				325					330					335		
Ile	Lys	Pro	Asn	Leu	Thr	Lys	Leu	Arg	Lys	Met	Ala	Gln	Ala	Trp	Arg	
				340					345					350		
Leu	Phe	Gly	Lys	Ala	Glu	Cys	Asp	Thr	Arg	Gln	Ser	Leu	Gln	Gln	Ser	
				355					360					365		
Met	Pro	Pro	Cys	Glu	Pro	Pro										
				370					375							

<210> 3823

<211> 6280

<212> DNA

<213> Homo sapiens

<400> 3823

nngggtgccc	actgcctcct	cgtcccccctc	cccccaagca	acaacaacaa	caacaactcc
60	aagcacaccg	gccataagag	tgcgtgtgtc	cccaacatga	ccgaacgaag
120	ctctctgaag	agatcaacaa	cttaagagag	aagggtcatga	agcagtcgga
180	aacctgcaga	gccagggtgca	gaagctcaca	gaggagaaca	ccacccttcg
240	gaacccaccc	ctgaggatga	ggatgatgac	atcgagctcc	gcggtgctgc
300	gccccacccc	ctccaataga	ggaagagtgc	ccagaagacc	tcccagagaa
360	aaccagaca	tgctggctcc	tttcatggcc	cagtgccaga	tcttcatgga
420	agggatttct	cagttgatcg	tgtccgtgtc	tgcttcgtga	caagcatgat
480	gctgcccgtt	gggcctcagc	aaagctggag	cgctcccact	acctgatgca
540	gctttcatga	tggaaatgaa	gcatgtcttt	gaagaccctc	agaggcgaga
600	cgcaagatca	gacgcctgcg	ccaaggcatg	gggtctgtca	tcgactactc
660	cagatgattg	cccaggacct	ggattggaac	gagcctgcgc	tgattgacca
720	ggcctcagcg	accacattca	ggaggagctc	tcccacctcg	aggtcgccaa
780	gctctgattg	ggcagtgcat	tcacattgag	agaaggctgg	ccagggctgc
840					

aagccacgct cgccaccccg ggcgctggtg ttgcctcaca ttgcaagcca ccaccaggta
900
gatccaaccg agccggtggg aggtgccgcg atgcgcctga cgcaggaaga aaaagaaaga
960
cgcagaaaagc tgaacctgtg cctctactgt ggaacaggag gtcactacgc tgacaattgt
1020
cctgccaagg cctcaaagtc ttgcgcggcg ggaaactccc cggccccgct gtagagggac
1080
cttcagcgac cgggccagaa ataataaggt cccacaaga tgatgcctca tctccacact
1140
tgcaagtgat gctccagatt catcttcggt gcagacacac cctgttcgtc cgagccatga
1200
tcgattctgg tgcttctggc aacttcattg atcacgaata tgttgctcaa aatggaattc
1260
ctctaagaat caaggactgg ccaatacttg tggaagcaat tgatgggctc cccatagcat
1320
cgggcccgat tgtccacgaa actcacgacc tgatagttga cctgggagat caccgagagg
1380
tgctgtcatt tgatgtgact cagtctccat tcttcctgt cgtcctaggg gttcgtggc
1440
tgagcacaca tgatcccaat atcacatgga gcactcgatc tatcgtcttt gattctgaat
1500
actgccgcta ccactgccgg atgtattctc caataccacc atcgtccca ccaccagcac
1560
cacaaccgcc actctattat ccagtagatg gatacagagt ttaccaacca gtgaggtatt
1620
actatgtcca gaatgtgtac actccagtag atgagcacgt ctaccagat caccgcctgg
1680
ttgacctca catagaaatg atacctggag cacacagtat tcccagtga catgtgtatt
1740
cactgtccga acctgaaatg gcagctcttc gagattttgt ggcaagaaat gtaaaagatg
1800
ggctaattac tccaacgatt gcacctaatg gagcccaagt tctccagggt aagagggggt
1860
ggaaactgca agtttcttat gattgccgag ctccaaacaa ttttactatc cagaatcagt
1920
atcctgcct atctattcca aatttagaag accaagcaca cctggcaacg tacactgaat
1980
tcgtacctca aatacctgga taccaaacat acccacata tgccggtac cgcacctacc
2040
cagtaggatt cgcctggtac ccagtgggac gagacggaca aggaagatca ctatatgtac
2100
ctgtgatgat cacttggaaat ccacactggt accgccagcc tccggtacca cagtaccgc
2160
cgccacagcc gccgcctcca ccaccaccac cgcgcgcgc tccatcttac agtacctgt
2220
aaatacctgt catgtccttc aggatctctg cctcaaaat ttattcctgt tcagcttctc
2280
aatcagtgc tgtgtgctaa attttaggct actgtatctt caggccacct gaggcacatc
2340
ctctctgaaa cggctatgga aggttagggc cactctggac tggcacacat cctaaagcac
2400
caaaagacct tcaacatttt ctgagagcaa cagagtattt gccataaat gatctctcat
2460

ttttccacct tgactgccaa tctaactaaa ataattaata agtttacttt ccagccagtc
2520
ctggaagtct ggggttttacc tgccaaaacc tccatcacca tctaaattat aggctgccaa
2580
atttgctggt taacattttac agagaagctg atacaaacgc aggaaatgct gatttcttta
2640
tggaggggga gacgaggagg aggaggacat gacttttctt gcggtttcgg taccctcttt
2700
ttaaactcact ggaggactga ggccttatta aggaatccaa aattatcggg gcagtgtgga
2760
aaggcttccg tgatcctctc gctgcaccct tagaaacttc accgtcttca aactccattt
2820
ccatgggttct gttaattctc aaggagcagc aactcgactg gttctcccag gagcaggaaa
2880
aacccttggtg acatgaaaca tctcaggcct gaaaagaaag tgctctctca gatggactct
2940
tgcattgtta gactatgtct tcacatcatg gtgcaaatca catgtaccca atgactccgg
3000
ctttgacaca acaccttacc atcatcatgc catgatggct tccacaaagc attaaacctg
3060
gtaaccagag attactggtg gctccagcgt tgtttagatgt tcatgaaatg tgaccacctc
3120
tcaatcacct ttgagggcta aagagtagca catcaaaagg actccaaaat cccataccca
3180
actcttaaga gatttgtcct ggtacttcag aaagaatttt catgagtgtt ctttaattggc
3240
tggaaaagca ccagctgacg ttttggaaga atctatccat gtgtctgcct ccatatgcat
3300
ctgggcattt catcttcagt cccctcatta gactgtagca ttaggatgtg tggagagagg
3360
agaaatgatt tagcacccag attcacactc ctatgcctgg aagggggaca tctttgaaga
3420
agaggaatta gggctgtgga cactgtcttg aggatgtgga cttccttagt gagctccaca
3480
ttacttgatg gtaaccactt caaaaggatc agaatccacg taatgaaaaa ggtccctcta
3540
gaggatggag ctgatgtgaa gctgccaatg gatgaaaagc ctcagaaagc aactcaaagg
3600
actcaaagca acggacaaca caagagttgt cttcagccca gtgacacctc tgatgtcccc
3660
tggaagcttt gtgctaacct gggactgcct gacttccttt agcctgggtcc cttgtacta
3720
ccttgaaactg ttttatctaa cctctctttt tctgtttaat tctttgctac tgccattgac
3780
cctgctgcag gatttgtgtc attttcctgc ctggttgctg agactccatt ttgctgccac
3840
acacagagat gtaagaggca ggctttaatt gccaaagcac agtttgagca gtagaaaaca
3900
acatggtgta tatctcaaat tgctgacat gaagaggagt ctaacggtga agtttcactt
3960
ttcatcagca tcatctttca catgttcatt atcatccgct cttattcttg catgtttaaa
4020
cacttaaaat ttttagtata attttttagtg tgttttgaag tgggtgactag gctttcaaaa
4080

acttccattg aattacaaag cactatccag ttcttattgt taaactaagt aaaaatgata
4140
agtaacatag tgtaaaatat tcctttactg tgaacttctt acaatgctgt gaatgagagg
4200
ctcctcagaa ctggagcatt tgtataataa ttcattcctgt tcatcttcaa ttttaacatc
4260
atatataatt tcaattctat caattgggcc tttaaaaatc atataaaagg atataaaatt
4320
tgaaaagaga aacctaattg gctatttaac ccaaaacaac ttttttttct cttcaatgga
4380
atcggaagc ttgtcaatca ctcatgtgtt ttagagtaat tactttttaa atggtgcatt
4440
tgtgtctctg aactattttg aagagtcact tctgtttacc tcaagtatca attcatcctc
4500
catacatttg aattcaagtt gtttttttgc caaatttaca gttgtcaatt gatcttcaag
4560
ctgcaggggt cctagaaatg ggccgttgtc tgtagccctg gcatgtgcac acggacattt
4620
gccaccactg caagcaaaag tctggagaag ttcaccaacg acaagaacga ttagggaaaa
4680
tatgctgctg tgggttaaca actcagaaag tccctgatcc acatttggtt gtttactaaa
4740
gcttgtgatt aacttttttg cagtgtgtac tatgctctat tgctatatat gctatctata
4800
aatgtagatg ttaaggataa gtaattctaa atttattatt ctatagtttt gaagtttggt
4860
taagtttctt ttcactcaat tgatttattt tgttgttaat caaatttatg ttaattggat
4920
cctttaaatt ttttttgga ttttccaaca aaaatggctt tattcataag aaaggaaaaa
4980
aatcaatgga atttgatctc taaagaagtt agaaaggag caaaataaaa aacataaagg
5040
agatagatga attagtaagc aaatcagtag tcgagttttt caaactggca aaattaatta
5100
attgactttt agcccaaatt tacattgtta attaaatcaa gaaggaagaa gatctaagag
5160
ctccattga taggcaagcc tagagagaac tagctaaatt tatcatgcta ggatattgaa
5220
acacagaaag tttacatata tttatgaagg gtcaatttag tttggacagt gaggtatttg
5280
tcttagtgga aaaaaggaga attagtctga tcaaatcgtg aagtaatata gtgaacttgc
5340
aggtgcacaa aataagaggg ccacatctat atggtgcagt ctggaattct gtttaagttt
5400
gtaggtacct cttggacttc tgaattgatc cagttgtcat ccaccacaga catctcacat
5460
cagatacaga cagttccaag attgacaaca gagaacaacc tgctggaaag acctgggcag
5520
aaatggagag ccctgcggga accatgctac attttcatct aaagagagaa tgcacatctg
5580
atgagactga aagttctttg ttgttttaga ttgtagaatg gtattgaatt ggtctgtgga
5640
aaattgcatt gcttttattt ctttgtgtaa tcaagtttaa gtaatagggg atatataatc
5700

ataagcattt taggggtggga gggactatta agtaatttta agtgggtggg gttatttaga
 5760
 atgttagaat aatattatgt attagatatc gctataagtg gacatgcgta cttacttgta
 5820
 accctttacc ctataattgc tacccttaaa gatttcaaata aaactcggag ggaactgcag
 5880
 ggagaccaac ttatttagag cgaattggac atggataaaa accccagtgg gagaaagttc
 5940
 aaaggtgatt agattaataa tttaatagag gatgagtgac ctctgataaa ttactgctag
 6000
 aatgaacttg tcaatgatgg atggtaaatt ttcattggaag ttataaaagt gataaataaa
 6060
 aacccttgct tttacccttg tcagtagccc tctcctacc actgaacccc attgccccta
 6120
 cccctccttc taactttatt gctgtattct ctccaactta tatttctctc tatttgctaa
 6180
 tattgcattg ctgttacaat aaaaattcaa taaagattta gtgggttaagt gcaaaaaaaaa
 6240
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 6280

<210> 3824

<211> 342

<212> PRT

<213> Homo sapiens

<400> 3824

Asn	Asn	Asn	Asn	Ser	Lys	His	Thr	Gly	His	Lys	Ser	Ala	Cys	Val	Pro
1				5					10					15	
Asn	Met	Thr	Glu	Arg	Arg	Arg	Asp	Glu	Leu	Ser	Glu	Glu	Ile	Asn	Asn
			20					25					30		
Leu	Arg	Glu	Lys	Val	Met	Lys	Gln	Ser	Glu	Glu	Asn	Asn	Asn	Leu	Gln
			35				40					45			
Ser	Gln	Val	Gln	Lys	Leu	Thr	Glu	Glu	Asn	Thr	Thr	Leu	Arg	Glu	Gln
			50				55					60			
Val	Glu	Pro	Thr	Pro	Glu	Asp	Glu	Asp	Asp	Asp	Ile	Glu	Leu	Arg	Gly
65					70					75				80	
Ala	Ala	Ala	Ala	Ala	Ala	Pro	Pro	Pro	Pro	Ile	Glu	Glu	Glu	Cys	Pro
				85					90					95	
Glu	Asp	Leu	Pro	Glu	Lys	Phe	Asp	Gly	Asn	Pro	Asp	Met	Leu	Ala	Pro
			100					105					110		
Phe	Met	Ala	Gln	Cys	Gln	Ile	Phe	Met	Glu	Lys	Ser	Thr	Arg	Asp	Phe
		115					120					125			
Ser	Val	Asp	Arg	Val	Arg	Val	Cys	Phe	Val	Thr	Ser	Met	Met	Thr	Gly
		130				135					140				
Arg	Ala	Ala	Arg	Trp	Ala	Ser	Ala	Lys	Leu	Glu	Arg	Ser	His	Tyr	Leu
145				150					155					160	
Met	His	Asn	Tyr	Pro	Ala	Phe	Met	Met	Glu	Met	Lys	His	Val	Phe	Glu
			165						170					175	
Asp	Pro	Gln	Arg	Arg	Glu	Val	Ala	Lys	Arg	Lys	Ile	Arg	Arg	Leu	Arg
			180					185				190			
Gln	Gly	Met	Gly	Ser	Val	Ile	Asp	Tyr	Ser	Asn	Ala	Phe	Gln	Met	Ile
		195					200					205			
Ala	Gln	Asp	Leu	Asp	Trp	Asn	Glu	Pro	Ala	Leu	Ile	Asp	Gln	Tyr	His

210	215	220
Glu Gly Leu Ser Asp His Ile Gln Glu Glu Leu Ser His Leu Glu Val		
225	230	235
Ala Lys Ser Leu Ser Ala Leu Ile Gly Gln Cys Ile His Ile Glu Arg		240
	245	250
Arg Leu Ala Arg Ala Ala Ala Ala Arg Lys Pro Arg Ser Pro Pro Arg		255
	260	265
Ala Leu Val Leu Pro His Ile Ala Ser His His Gln Val Asp Pro Thr		270
	275	280
Glu Pro Val Gly Gly Ala Arg Met Arg Leu Thr Gln Glu Glu Lys Glu		285
	290	295
Arg Arg Arg Lys Leu Asn Leu Cys Leu Tyr Cys Gly Thr Gly Gly His		300
305	310	315
Tyr Ala Asp Asn Cys Pro Ala Lys Ala Ser Lys Ser Ser Pro Ala Gly		320
	325	330
Asn Ser Pro Ala Pro Leu		335
	340	

<210> 3825

<211> 2051

<212> DNA

<213> Homo sapiens

<400> 3825

```

nggacacctc acaggtgcgc ctccgaggag agggagggcg ccctgcgtcc ggcagaggag
60
gcgagcatcc cgctcagggtg atgaggaacc cctcgcgcac ccagcgcaga aggctgctgc
120
cgccggacgc ctccattggt tgaccacaac aaggggccgga ttctcaccca ggatcctaag
180
gcctttgtag tccttcagcc actgtgggccc ctgcctctgc ctgttcttct ggaatgtctt
240
gggggttttg atcctgtcac tgtgacctgc aaatccaaga gacacatctt tggaagataa
300
gagagcttct tcaagaccaa aaaaggagac ggcattgatac ccatgtaggg aattcccca
360
agcagggtct gccatacctg gaccccgagg agcctgcttg ctggaaaggc tttcctgtct
420
gatgtgcagg aggcagaatg ccaaactgac tcttcaagg gcaactgcag gggctcgaga
480
ccagccagca gtatctcatc cttcgatata ggggatatac tgtacagtcc tttttctaga
540
agtgagacat acaagattac tctacaanga ggaagattcc aggggtcaa aaacgcaaag
600
gtttgcactt tgagagcccc ttggaatggt gacaactcag gatctaaaac aaagtctctg
660
gttaatgagt tacagaattc acgtggaagt caatgtcact ttataatcga taataatact
720
gagtgaggaa cactatgcag gaagaaacct tccgtagaaa gacaggcagg gnnaaaagct
780
taggctgacc ttaaacttac ctaatagagc aagcctgaga tagactgcca aaatggccaa
840
ataagagact ctatgaaata acagtcttgt aactgtagta atcataagga aattttctcc
900

```


ttgaaatcac gataccaaat aggaaaaatg atctacaagt gcccacatgtg tagggaattt
 960
 ttctctgaga gatgccgagg tggtcagtat cctgactttc agaggccttt ttttgtttgt
 1020
 ttttaattttt actagattga tattaataaac tcatgtggag gaactcaagg aatgttttaga
 1080
 agacccaaaag tccccaatga caggaacaaa agcaaccaat ttttaacttt ctcttctcat
 1140
 tcctgttttc attgattttcc cacatgtagt ccttttgctc aggaagtctt tggggaaatt
 1200
 aaggatcttt gaagctctga aataggtgat cagggttagtg gtgtctgtca gctgtctaag
 1260
 aggttggaag atgaactact caagatagtc acgaaaatac tgaaagttag atttttcttt
 1320
 ccatatttga attaatTTTT tctgtttgac tggaaggggt ttttgataaa ctaaaacctc
 1380
 agcgcataaa ggagatttaa aaggagcaca tgatttagtg ggtgggccat gaaactagag
 1440
 atgggatttg ggggtgaatt tgtcaatata tggattttta tccagacata tctgctaaca
 1500
 agcctttggt aagtcacttc agatactttt cctccttttt acaaagagag ggctggctta
 1560
 gttatttgcc aaagcccctt ccaggcctga attccacaag tacaatttac tgtagtgtct
 1620
 tatcactctt tcatgtcaca atagcgtgga gcattagaga aaagcctaga cttttagttg
 1680
 atagccagtt gaaatatcat tgatagaatt ttagtttttag gaaaaattgg tttgatttct
 1740
 agctttatta ctattaggta tgtgagcttg ggcaaatcgc ttaatctttg agtctagttt
 1800
 tctctcaaaa tgagaacatt aggctaaatg atttccgagt ttccagctag tcctagagtt
 1860
 ctatatttct acatagttga attattttat catgctgttg ctggggaata tgactaacc
 1920
 ttttgaagct actaatttta tgtcgagctt taaagtccat aattgttatc ttcagaaaat
 1980
 attatttgac ctacagtatg tccaaatcaa ttttaataaaa tcgctttata acaggaaaaa
 2040
 aaaaaaaaaa a
 2051

<210> 3826

<211> 125

<212> PRT

<213> Homo sapiens

<400> 3826

Gly	Ile	Pro	Gln	Ser	Arg	Ala	Cys	His	Thr	Trp	Thr	Pro	Arg	Ser	Leu
1				5					10					15	
Leu	Ala	Gly	Lys	Ala	Phe	Leu	Ser	Asp	Val	Gln	Glu	Ala	Glu	Cys	Gln
			20					25					30		
Thr	Asp	Ser	Ser	Arg	Gly	Asn	Cys	Arg	Gly	Ser	Arg	Pro	Ala	Ser	Ser
		35				40						45			
Ile	Ser	Ser	Phe	Asp	Thr	Gly	Asp	Ile	Leu	Tyr	Ser	Pro	Phe	Ser	Arg

50		55		60
Ser Glu Thr Tyr Lys Ile Thr Leu Gln Xaa Gly Arg Phe Gln Gly Leu				
65		70		75
Lys Asn Ala Lys Val Cys Thr Leu Arg Ala Pro Trp Asn Val Asp Asn				80
	85		90	95
Ser Gly Ser Lys Thr Lys Phe Cys Val Asn Glu Leu Gln Asn Ser Arg				
	100		105	110
Gly Ser Gln Cys His Phe Ile Ile Asp Asn Asn Thr Glu				
	115		120	125

<210> 3827

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 3827

nacgcgtgcc ggagcagcaa acccaggcca gcctgaaaag tcacctctgg cgctcagcgt
 60
 ctctggagag cgtggagtgt caactgttga tgactgggtt tatattgagg agccccgagc
 120
 gtgcagaaca agagtcccaa gtcagatgaa gaggccgaga gcactaaaga agctcagaat
 180
 gaattatttg aagcacaagg acagctgcag acctgggatt ctgaggactt tgggagcccc
 240
 cagaagtcct gcagcccctc ctttgacacc ccagagagcc agatccgggg cgtgtgggaa
 300
 gagctggggg tgggcagcag cggacacctg agcagcagag agctggctgt ggtctgccag
 360
 agcgtcgggc tccagggact cgagaaagag gaactcgaag acctgtttaa caaactggat
 420
 caagacggag acggcaaagt gagtcttgag gaattccagc ttggcctctt cagtcatgag
 480
 cccgcgtac ttctagagtc ttccactcgg gttaaaccga gcaaggcttg gtctcattac
 540
 caggtcccag aggagagcgg ctgccacacc accacaacct catccctcgt gtccctgtgc
 600
 tccagcctgc gcctcttctc cagcattgac gatggttctg gcttcgcttt tctgatcag
 660
 gtccctggcca tgtggacca ggaggggatt cagaatggca gggagatctt gcagagcctg
 720
 gacttcagcg tggacgagaa ggtgaacctt ctggagctga cctgggccct tgacaacgag
 780
 ctcatgacag tggacagtgc cgtccagcag gcagccctgg cctgctacca ccaggagctg
 840
 agctaccagc aagggcaggt ggagcagctg gcaaggagc gtgacaaggc aaggcaggac
 900
 ctggagaggg ccgagaagag gaacctggag tttgtgaaag agatggacga ctgccactcc
 960
 accctggagc agctcacgga gaagaaaatc aagcatctgg agcaggggta ccgggaaagg
 1020
 ctgagcctcc tgcggtctga ggtggaggcg gagcgagagc tgttctggga gcaggccac
 1080
 aggcagaggg ccgcgctgga gtgggacgtg gggcgctgc aggctgagga ggctggcctc
 1140

cgcgagaagc tgaccctggc cctgaaggaa aacagtcgcc tacagaagga gattgtggaa
 1200
 atgggtggaaa agcttttcgga ttcggagagg ctggccctga agctg
 1245

<210> 3828

<211> 379

<212> PRT

<213> Homo sapiens

<400> 3828

Gly	Ala	Pro	Ser	Val	Gln	Asn	Lys	Ser	Pro	Lys	Ser	Asp	Glu	Glu	Ala
1				5					10					15	
Glu	Ser	Thr	Lys	Glu	Ala	Gln	Asn	Glu	Leu	Phe	Glu	Ala	Gln	Gly	Gln
			20					25					30		
Leu	Gln	Thr	Trp	Asp	Ser	Glu	Asp	Phe	Gly	Ser	Pro	Gln	Lys	Ser	Cys
			35				40					45			
Ser	Pro	Ser	Phe	Asp	Thr	Pro	Glu	Ser	Gln	Ile	Arg	Gly	Val	Trp	Glu
	50					55					60				
Glu	Leu	Gly	Val	Gly	Ser	Ser	Gly	His	Leu	Ser	Glu	Gln	Glu	Leu	Ala
65					70				75					80	
Val	Val	Cys	Gln	Ser	Val	Gly	Leu	Gln	Gly	Leu	Glu	Lys	Glu	Glu	Leu
			85					90					95		
Glu	Asp	Leu	Phe	Asn	Lys	Leu	Asp	Gln	Asp	Gly	Asp	Gly	Lys	Val	Ser
			100					105					110		
Leu	Glu	Glu	Phe	Gln	Leu	Gly	Leu	Phe	Ser	His	Glu	Pro	Ala	Leu	Leu
			115				120						125		
Leu	Glu	Ser	Ser	Thr	Arg	Val	Lys	Pro	Ser	Lys	Ala	Trp	Ser	His	Tyr
	130					135					140				
Gln	Val	Pro	Glu	Glu	Ser	Gly	Cys	His	Thr	Thr	Thr	Thr	Ser	Ser	Leu
145					150					155					160
Val	Ser	Leu	Cys	Ser	Ser	Leu	Arg	Leu	Phe	Ser	Ser	Ile	Asp	Asp	Gly
			165					170					175		
Ser	Gly	Phe	Ala	Phe	Pro	Asp	Gln	Val	Leu	Ala	Met	Trp	Thr	Gln	Glu
			180					185					190		
Gly	Ile	Gln	Asn	Gly	Arg	Glu	Ile	Leu	Gln	Ser	Leu	Asp	Phe	Ser	Val
		195					200					205			
Asp	Glu	Lys	Val	Asn	Leu	Leu	Glu	Leu	Thr	Trp	Ala	Leu	Asp	Asn	Glu
	210					215					220				
Leu	Met	Thr	Val	Asp	Ser	Ala	Val	Gln	Gln	Ala	Ala	Leu	Ala	Cys	Tyr
225					230					235				240	
His	Gln	Glu	Leu	Ser	Tyr	Gln	Gln	Gly	Gln	Val	Glu	Gln	Leu	Ala	Arg
			245					250					255		
Glu	Arg	Asp	Lys	Ala	Arg	Gln	Asp	Leu	Glu	Arg	Ala	Glu	Lys	Arg	Asn
			260				265					270			
Leu	Glu	Phe	Val	Lys	Glu	Met	Asp	Asp	Cys	His	Ser	Thr	Leu	Glu	Gln
		275					280					285			
Leu	Thr	Glu	Lys	Lys	Ile	Lys	His	Leu	Glu	Gln	Gly	Tyr	Arg	Glu	Arg
	290					295					300				
Leu	Ser	Leu	Leu	Arg	Ser	Glu	Val	Glu	Ala	Glu	Arg	Glu	Leu	Phe	Trp
305					310					315				320	
Glu	Gln	Ala	His	Arg	Gln	Arg	Ala	Ala	Leu	Glu	Trp	Asp	Val	Gly	Arg
			325					330					335		
Leu	Gln	Ala	Glu	Glu	Ala	Gly	Leu	Arg	Glu	Lys	Leu	Thr	Leu	Ala	Leu

	340		345		350										
Lys	Glu	Asn	Ser	Arg	Leu	Gln	Lys	Glu	Ile	Val	Glu	Met	Val	Glu	Lys
	355					360					365				
Leu	Ser	Asp	Ser	Glu	Arg	Leu	Ala	Leu	Lys	Leu					
	370					375									

<210> 3829

<211> 5713<212> DNA

<213> Homo sapiens

<400> 3829

```

naccggtgac tgtatcccgt ggtttctcac ttaggactct ttttatcccc acccagaaca
60
caggagtcct gacctgcgtt ctgaagcatt tggaatacaa cggtcacatt taagaccctg
120
gaggaggagc tatttgggaa caatgaggag agcccagctt ttaaggagtt cttggacctg
180
ctggggggaca cgatcacact gcaggatttc aaaggtttcc gaggaggcct ggacgtgacc
240
cacggacaga caggggtgga atcagtgtac acaacattcc gggacagggg gatcatgttt
300
cacgtttcca caaagctgcc atttaccgac ggagacgccc agcagctcca gagaaagaga
360
cacattggaa atgacatcgt ggccatcatc ttccaagagg aaaacacgcc gtttgtccca
420
gacatgatag cctccaattt cttacatgcc tacatcgtcg tgcaggtcga gacccaggc
480
acagagaccc catcctacaa ggtctctgtc actgcgcggg aagatgtgcc cacctttggt
540
ccacctctgc ccagtcctcc cgttttccag aaggggcccg aattcaggga gtttctgctc
600
accaagctca ccaatgccga gaacgcctgc tgcaagtcgg acaagtttgc aaagctggag
660
gaccggacca gggctgccct cctggacaac cttcacgatg agctccacgc ccacacacag
720
gccatgctgg gactgggccc agaggaggac aagtttgaga atggaggcca cgggggggttc
780
ctggagtctt ttaagagggc catccgcgta cgcagccact ccatggagac catggtgggc
840
ggccagaaga agtcgcacag tgggggcatc cctggcagcc tcagcggggg catctccac
900
aacagcatgg aggtcaccaa gaccacctc tcgcctccag tgggtggcggc aacggtgaag
960
aaccagtcac ggagtcccat caagcgacgc tcggggctct tccccgcct gcacacgggc
1020
tcagaaggcc agggcgacag ccgggcacga tgtgacagca catccagcac acccaagacc
1080
ccagatggtg gacactcctc tcaggagata aagtctgaga cctcatccaa tcccagctct
1140
ccagaaatct gcccacaaca ggagaagccc ttcatgaagt tgaaggaaaa cggccgcgcc
1200
atctcccgt cctcctccag caccagcagc gtcagcagca ctgcagggga gggcgaggcc
1260

```

atggaggagg ggcacagtgg gggcagccag ccgtccacga cctcacccctt caagcaggag
 1320
 gtgtttgtct acagcccgtc cccgagcagc gagagcccca gcctgggggc agctgccacc
 1380
 ccgatcatca tgagccggag tcccacagat gccaaaagca gaaactcccc gagatcgaac
 1440
 ctgaaattcc gctttgacaa gctcagccat gccagctctg gtgcgggtca ctaatgtgaa
 1500
 agtggagtcc ttgcctgtc caagggaatc cctcttctg tcctggaaaa ggctcctgac
 1560
 ctcccagtgt gatgtccggg tcctttatca tcctattcat cctggagagg aaaagtgtcg
 1620
 ggcaaagggg gatctggggg gagctcagca gtgactgggg agctggtctg cctcagagac
 1680
 agagtagggg gtgggagcag agcctcgggt agggctcttg ccacagggca gtgccttctt
 1740
 gaacgtggca ggctttacta ccaggaacgc actcgggtgt ggaggcccca tgttcccagg
 1800
 agccaagatt cgtagcatcc ttgaggccat cctgataaaa ttgggcgcta ttgccccgt
 1860
 agctctggag ctctaaaccg tctatctgct tctgtgctga acgcctttcc catctgctga
 1920
 cgtaggccca gggtgcctt gccctgctg ccagtgtacc gtgagcgggg ctccagccag
 1980
 ttcaagctca gagccagagc tggacggggc agaactgcgc tgcacacttc ctggactgag
 2040
 gcggggactt tgggtccac ccggtttctc ctgattatgg ctgctgtggg gtgaggggag
 2100
 ggaggggag ccccgaggca gtctcttccc ttgagaaga tattttccca caaaggggtg
 2160
 ggaagccagg agtgagaagg aattcaggga gagcaaagga gccagtgtct agatgctgct
 2220
 gtgttggtt aggaaaacct cgggcctgag ggccaggccg gagcccaggt ctctgctgac
 2280
 aatgggggtt cagggaagac gtcggttatc cccctcccca cttactcgag gagagagggt
 2340
 agggggggat gacttgcggt ttctgatcag gccctgggt ggggaagggg cacagtgtcc
 2400
 ctcagcagct tacgcccctg gagtcttggg gggcccagcc tggccctggg gccttttcca
 2460
 gctactgtgc ccttgggcag ctgcgtctgg ggctcaacc cccaatcctg ttcccctctc
 2520
 cagctgcggg tctgtaggca gctgtcacat ctgaagggtt tctgcaacct ggaccccatc
 2580
 tgggtgtggg tcagaccctg tgaccacat gccacccca cctccacag agcccccttg
 2640
 ctgggacagc cagctcacct ccaaggacat cccctcctgg cttctcccc ttccgagtct
 2700
 gcagcgccgt gggcttctct gccgatgggc cggggttggg gttaagggtg gcacctcca
 2760
 ggtacaacga gcctgaagag cccctttcag tgcagacggg gctgcagagt gacactggct
 2820
 gggcacctgc cccacgacca atgacaagga tttccagctg aatgctttat tcccataggg
 2880

atctggacct gtgccaaga tataaatact acactttttt tttttttttt tttttaactg
2940
acattgtgaa attctcccta tagcttttgc cattcaagca acattgtgat ctttcttccc
3000
cgccacgtgt gtgggaatga ttgagtcctg tttgcaagct ggagaggagc tctcccttg
3060
ctagtacttt ctctaaagta ctagtctagt aaaatttatt cttgttagaa ggtcaacaaa
3120
atatctgttt agcttttatg aagagtcacc gtagcagccc ccacggctgg aaagaggcct
3180
gtacgttctg gacgcgtttt gttggctggg cttctggagg cactggcaag gtcaaactgc
3240
atttctttaa gaacagttgc aggatctggc ttgcctctgt gggaagccgg cattacaggt
3300
gcttgggtga tgggccgtgt cacattgcca tctgggggtcc tttggggttt ccaggttgc
3360
accatgctgt cccatttggg aatcccatac ctgcctgtcc cactgcgct ggctgaccct
3420
tgctgcctgc tgctcttgg gagggtttg tcctgcctc tgagctggtg ggcaggatgg
3480
ctgggtggcc ccagagaag cacagacctg ggatggggtc tccatgcccg gtttgcgtt
3540
ggaatgatct gaacaggacc ccaaagcct ctccctctg gtcctgcctc actatctcta
3600
ggagctccat cctgtggctt ccagagtgtg cacttcagc ccacccgggc agtgcctgaga
3660
gggaggagga gaacaaggat ggcccagcct cccctccctc ccctagacca cggggcgggc
3720
agctcgggtt cctggagggc tgtttcccc acgctgtccc tacatctgct ctgatctaaa
3780
atgtctttcc ttttatgctg cgcccagtct tggggctcaa agatttgccc aaacctcatt
3840
ggcctcgtg actaggtcctc tctagatggt gtcacgctg gtgtttgagg catttccact
3900
gtgatctcca cgaggggatg ttttccggga cacatctctg gctctgggaa ctgctgact
3960
cactgaagaa actacttttc aggcactgta gggtcaccca tatgcctcca gctcagttga
4020
cgcttaaaaa caggtgcaga aaagctcggc atggaaggct ttaatgagag tgtctgtcta
4080
tgccagtcac gtaaaatgac gtttcttgaa aaagattcag tggttcagct ttgtcagcat
4140
catctcaaca caagcctgct ggctcttttt agcatctcat ccaacctgt catcgtccag
4200
atgagaaatc ttagcccagg tgaggggagt aacttgcttg aggtcacaca gctggctggt
4260
ggcaaagctg ggattagaac cctcaaccca gggcccttc ctctgcagcg cctacatggt
4320
tggttgaata agtggctgctg tttcctgggg ccctggggtt tggggaagcc agttagctgc
4380
tgctttggca ctggcatgga ggtgagcagt caaggatgct ggtgaggccg cagtttctgc
4440
tctttttcat caggggggat agtctctagg atttttcagt gaggaccctt gggctttgga
4500

tgcagcttga accaagaaaa cgaggagggg aagggattca gtgaactatt cctcagtggg
 4560
 atcggttctt cagctcctga tgggggctgt gtaatggggg cagaggccag ggaaaaagat
 4620
 gctgttcacc caccctcagc ttcccttttc ctaaattaag aggaaaagtg gtcaaagaaa
 4680
 aactcttcat ttctccctga ttcttaagcg aaggtgggta atagaaactc aggctcccgt
 4740
 gacaaggcag gacaagagcc tgtttcgctt tcctccctga cctgccagg tgccaactca
 4800
 aacactacct ttctcattgg tttctaagtc agtagagaca gatctgtttt aagcagttgg
 4860
 gggttcgagt agatctcatg ggtacaggag gccagcaggg accaggccag tcagccatgc
 4920
 tcaggacccc tcggctcctc cccagcctc tagctaccct gtatcgaggc aaggggaggg
 4980
 cagtaaagtt tgccaagcct gatcctgcag cctgggtggg ctggctgggg tattctttta
 5040
 ccaaactctg ttttaccgcc agcccttgt acaccccaat cccatgtctc cctcccttca
 5100
 gctggaccgt gtgccccctt gggaggaaga agacaagccc cactaggggc aagggcagca
 5160
 gagccctgcc gagtgagagg ctgtggggca gcggctctgt cctgtgcctt accagccctg
 5220
 gggaggggga catttggtg gaagactgga atttaattgc catcgctctt gattttgtga
 5280
 cattttctgt tggaagtgtg aactaccctc cccccccgc ttctgtctcc ttagcatgcg
 5340
 tgcagctctc tcctgttttg ggtgttcccc ttggacactc cagctcgggg actgctggcg
 5400
 tgtgagtgtg cagattcccc tgtgtggctg aacctaagaa ctgtggcttg gaagtgatgc
 5460
 tccatgtgac gacgactttg ctttctttcc tcttagtgag gaggtgattc gtagatccca
 5520
 actgcctatg taatgtaa atgtacatt taatttattg ctatggtagc acattgtatt
 5580
 tgttaatgta caaaacaaat tctaaaaggt tgacaaatgt atattttgtt gcttaaagt
 5640
 gtctttgcag aaattgacaa taaataacat attttgtgtc aaaaaaaaaa aaaaaaaaaa
 5700
 aaaaaaaaaa aaa
 5713

<210> 3830

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3830

Phe	Lys	Glu	Phe	Leu	Asp	Leu	Leu	Gly	Asp	Thr	Ile	Thr	Leu	Gln	Asp
1				5				10					15		
Phe	Lys	Gly	Phe	Arg	Gly	Gly	Leu	Asp	Val	Thr	His	Gly	Gln	Thr	Gly
			20				25					30			
Val	Glu	Ser	Val	Tyr	Thr	Thr	Phe	Arg	Asp	Arg	Glu	Ile	Met	Phe	His

35					40					45					
Val	Ser	Thr	Lys	Leu	Pro	Phe	Thr	Asp	Gly	Asp	Ala	Gln	Gln	Leu	Gln
50						55					60				
Arg	Lys	Arg	His	Ile	Gly	Asn	Asp	Ile	Val	Ala	Ile	Ile	Phe	Gln	Glu
65					70					75					80
Glu	Asn	Thr	Pro	Phe	Val	Pro	Asp	Met	Ile	Ala	Ser	Asn	Phe	Leu	His
				85					90					95	
Ala	Tyr	Ile	Val	Val	Gln	Val	Glu	Thr	Pro	Gly	Thr	Glu	Thr	Pro	Ser
			100				105						110		
Tyr	Lys	Val	Ser	Val	Thr	Ala	Arg	Glu	Asp	Val	Pro	Thr	Phe	Gly	Pro
	115					120					125				
Pro	Leu	Pro	Ser	Pro	Pro	Val	Phe	Gln	Lys	Gly	Pro	Glu	Phe	Arg	Glu
	130					135					140				
Phe	Leu	Leu	Thr	Lys	Leu	Thr	Asn	Ala	Glu	Asn	Ala	Cys	Cys	Lys	Ser
145				150						155					160
Asp	Lys	Phe	Ala	Lys	Leu	Glu	Asp	Arg	Thr	Arg	Ala	Ala	Leu	Leu	Asp
				165					170					175	
Asn	Leu	His	Asp	Glu	Leu	His	Ala	His	Thr	Gln	Ala	Met	Leu	Gly	Leu
			180					185					190		
Gly	Pro	Glu	Glu	Asp	Lys	Phe	Glu	Asn	Gly	Gly	His	Gly	Gly	Phe	Leu
	195					200					205				
Glu	Ser	Phe	Lys	Arg	Ala	Ile	Arg	Val	Arg	Ser	His	Ser	Met	Glu	Thr
	210					215					220				
Met	Val	Gly	Gly	Gln	Lys	Lys	Ser	His	Ser	Gly	Gly	Ile	Pro	Gly	Ser
225				230						235					240
Leu	Ser	Gly	Gly	Ile	Ser	His	Asn	Ser	Met	Glu	Val	Thr	Lys	Thr	Thr
				245					250					255	
Phe	Ser	Pro	Pro	Val	Val	Ala	Ala	Thr	Val	Lys	Asn	Gln	Ser	Arg	Ser
			260					265					270		
Pro	Ile	Lys	Arg	Arg	Ser	Gly	Leu	Phe	Pro	Arg	Leu	His	Thr	Gly	Ser
	275					280						285			
Glu	Gly	Gln	Gly	Asp	Ser	Arg	Ala	Arg	Cys	Asp	Ser	Thr	Ser	Ser	Thr
	290					295					300				
Pro	Lys	Thr	Pro	Asp	Gly	Gly	His	Ser	Ser	Gln	Glu	Ile	Lys	Ser	Glu
305				310						315					320
Thr	Ser	Ser	Asn	Pro	Ser	Ser	Pro	Glu	Ile	Cys	Pro	Asn	Lys	Glu	Lys
			325					330						335	
Pro	Phe	Met	Lys	Leu	Lys	Glu	Asn	Gly	Arg	Ala	Ile	Ser	Arg	Ser	Ser
			340					345					350		
Ser	Ser	Thr	Ser	Ser	Val	Ser	Ser	Thr	Ala	Gly	Glu	Gly	Glu	Ala	Met
	355					360					365				
Glu	Glu	Gly	Asp	Ser	Gly	Gly	Ser	Gln	Pro	Ser	Thr	Thr	Ser	Pro	Phe
	370														

<210> 3831

<211> 726

<212> DNA

<213> Homo sapiens

<400> 3831

```

aaatttgttg cagaagtttc ttgccttggtg ttttaaggct gaggagtggg aaacattctg
60
tgtgaacaat taagagagac ttgtggcaga agtagatttc tttggcattt gcacacagga
120
gtcagaaaca aatgatgtcc atagcatttg gctgggctaa cgtctaaagt cgtagcttt
180
agacgagtat gagttctcac tctgtgttac ctgctgagtc cctgagggca tgtgagttca
240
gtcctgaaac agaccactg nccgtgtcac agatcccagc ttcgctaagc tcagctttag
300
catgttatgg tttatcgttt ctccagctcc attccacaaa ctctcatata gatagaatta
360
atttcagtgt aaaaatggtg tcattctattc ttcagatacc taagttgtca tatctggggc
420
tgggagacat taaaaatag gagcaaaaat actgcaacct gtgtatccaa cttttcatct
480
cttttcttct ccttacagtc cagacctttt agccctccca ttcattcttc cagccctcct
540
ccaatagcac ccttagcgcg ggctgaaagc acttcttcaa tatcggaac caattccttg
600
agcgagacca ccaactccac agttgagaat gaacagcctt ccctcgtttg ggttgacaga
660
ggaaaggttt atttgacttt tgaaggttct tccaggggac ccagccccct aaccatggga
720
gctcag
726

```

<210> 3832

<211> 107

<212> PRT

<213> Homo sapiens

<400> 3832

```

Met Ser Ser His Ser Val Leu Pro Ala Glu Ser Leu Arg Ala Cys Glu
 1           5           10           15
Phe Ser Pro Glu Thr Asp Pro Leu Xaa Val Ser Gln Ile Pro Ala Ser
      20           25           30
Leu Ser Ser Ala Leu Ala Cys Tyr Gly Leu Ser Phe Leu Gln Leu His
      35           40           45
Ser Thr Asn Ser His Ile Asp Arg Ile Asn Phe Ser Val Lys Met Val
      50           55           60
Ser Ser Ile Leu Gln Ile Pro Lys Leu Ser Tyr Leu Gly Leu Gly Asp
      65           70           75           80
Ile Lys Asn Met Glu Gln Lys Tyr Cys Asn Leu Cys Ile Gln Leu Phe
      85           90           95
Ile Ser Phe Leu Leu Leu Thr Val Gln Thr Phe
      100           105

```

<210> 3833

<211> 1764

<212> DNA

<213> Homo sapiens

<400> 3833

gctagcggca gcgcgggaa gccactggc gaggcggctt ctccggctcc tgcgagcgcc
60
ggcggcgggg ccagctcgca gccgcggaag aagctggtat ccgtctcgca ccactgcaag
120
ggcaagatgc agctggtggc tgacctgctg ctgctgtcga gcgaggcgcg gcccggtgctc
180
ttcgagggcc ccgcctctc ttgtgccggc gccgagtcct tcgagcaggg ccgggacacc
240
atcatcgcg gcaccaagg gctctccatc ctcacccacg acgtgcagag ccagctcaac
300
atgggccgct tcggggaggc gggggacagc ctggtggagc tgggcgacct ggtggtgtcg
360
ctgaccgagt gctcggccca cgcggcctat ctggccgctg tggccacgcc gggcgcccag
420
cccgcgcagc cgggcctggt ggaccgctac cgcgtgacgc gatgccgcca cgagggtggag
480
cagggttgcg ccgtgctgcg cgccacgccc ctggccgaca tgacgccgca gctgctgctg
540
gagggtgtcg agggcctgtc gcgcaacctc aagttcctga cggacgcgtg cgccctggcc
600
agtgacaagt cacgggaccg cttttcgcgg gagcagttca agctgggcgt caagtgcattg
660
agcaccagcg cgtcggcgct gctggcctgc gtgcgcgagg tgaagggtgg gcccagtgag
720
ctggcgcgca gccgctgtgc gctcttcagc gggcccctgg tgcaggcagt gagcgccctg
780
gtaggcttcg ccaccgagcc gcagttcctg ggtcgcgcgg cagctgtgag cgccgagggc
840
aaggcggtgc agaccgccat cctgggcggc gccatgagcg tgggtgcggc ctgctgtctc
900
ctgaccaggt gcctcagga tctggcgag caccgccagc ggggcgcca gatgtcggac
960
cacagggaga ggctgaggaa ctcggcctgc gccgtgtctg aaggctgcac cctgctatct
1020
caggctttaa gggagaggtc ttgcccagg actttaccgc cagtgaattc caattctgtg
1080
aattagcacc ccaccccat accccttctt ccaccccgag actaaaggaa gatacttact
1140
ctctgcccct ctccatttat accaaagaaa tcataggtga aacccctac cctccccaac
1200
gttaaatgct cgagaggaat cttccacaag gcagggccat gcacgcaacc tgcacacgca
1260
cttgaggggc ccagggtgtc ctccaccagc ccccatgcag tagggactgg aagatatgtc
1320
atctgctggg tgtgttatca ctcccacccc ctacccagc ccgtcttccg gaattttctc
1380
actaaatttc attattgggc aggaaggagg tcatgggttc atttcatttt tgtttttgt
1440
gtttttaatt aaaagaaagg ttacctcagt ttctactcct tagacatgga tgtagctacc
1500

tttttttgta tgtctttttt tttttaagc aatcgtgttg aattaggagt atacttggtg
 1560
 tggaaagagt atgaatttgc catgtgattt gcaaattggg ggaagctact gtgagcgtgt
 1620
 gtttttttaa tttacactat agagtgattt ttttttcccc caacgtcaag tttttacctt
 1680
 gcatgtactg gagtatttat ttcattctatt aaaatgttat gttttctcaaa aaaaaaaaaa
 1740
 aaaaaaagtt ttgccctgtc gacc
 1764

<210> 3834

<211> 361

<212> PRT

<213> Homo sapiens

<400> 3834

Ala	Ser	Gly	Ser	Ala	Gly	Lys	Pro	Thr	Gly	Glu	Ala	Ala	Ser	Pro	Ala
1				5					10					15	
Pro	Ala	Ser	Ala	Gly	Gly	Gly	Ala	Ser	Ser	Gln	Pro	Arg	Lys	Lys	Leu
			20				25						30		
Val	Ser	Val	Cys	Asp	His	Cys	Lys	Gly	Lys	Met	Gln	Leu	Val	Ala	Asp
		35				40					45				
Leu	Leu	Leu	Leu	Ser	Ser	Glu	Ala	Arg	Pro	Val	Leu	Phe	Glu	Gly	Pro
	50					55				60					
Ala	Ser	Ser	Gly	Ala	Gly	Ala	Glu	Ser	Phe	Glu	Gln	Gly	Arg	Asp	Thr
65				70					75					80	
Ile	Ile	Ala	Arg	Thr	Lys	Gly	Leu	Ser	Ile	Leu	Thr	His	Asp	Val	Gln
			85					90						95	
Ser	Gln	Leu	Asn	Met	Gly	Arg	Phe	Gly	Glu	Ala	Gly	Asp	Ser	Leu	Val
		100				105						110			
Glu	Leu	Gly	Asp	Leu	Val	Val	Ser	Leu	Thr	Glu	Cys	Ser	Ala	His	Ala
	115					120					125				
Ala	Tyr	Leu	Ala	Ala	Val	Ala	Thr	Pro	Gly	Ala	Gln	Pro	Ala	Gln	Pro
	130				135					140					
Gly	Leu	Val	Asp	Arg	Tyr	Arg	Val	Thr	Arg	Cys	Arg	His	Glu	Val	Glu
145				150					155					160	
Gln	Gly	Cys	Ala	Val	Leu	Arg	Ala	Thr	Pro	Leu	Ala	Asp	Met	Thr	Pro
			165					170						175	
Gln	Leu	Leu	Leu	Glu	Val	Ser	Gln	Gly	Leu	Ser	Arg	Asn	Leu	Lys	Phe
		180					185					190			
Leu	Thr	Asp	Ala	Cys	Ala	Leu	Ala	Ser	Asp	Lys	Ser	Arg	Asp	Arg	Phe
	195					200						205			
Ser	Arg	Glu	Gln	Phe	Lys	Leu	Gly	Val	Lys	Cys	Met	Ser	Thr	Ser	Ala
	210				215					220					
Ser	Ala	Leu	Leu	Ala	Cys	Val	Arg	Glu	Val	Lys	Val	Ala	Pro	Ser	Glu
225				230						235				240	
Leu	Ala	Arg	Ser	Arg	Cys	Ala	Leu	Phe	Ser	Gly	Pro	Leu	Val	Gln	Ala
			245					250						255	
Val	Ser	Ala	Leu	Val	Gly	Phe	Ala	Thr	Glu	Pro	Gln	Phe	Leu	Gly	Arg
		260					265						270		
Ala	Ala	Ala	Val	Ser	Ala	Glu	Gly	Lys	Ala	Val	Gln	Thr	Ala	Ile	Leu
	275					280						285			
Gly	Gly	Ala	Met	Ser	Val	Val	Ser	Ala	Cys	Val	Leu	Leu	Thr	Gln	Cys

290		295		300
Leu Arg Asp	Leu Ala Gln His	Pro Asp Gly Gly	Ala Lys Met	Ser Asp
305	310	315		320
His Arg Glu	Arg Leu Arg Asn	Ser Ala Cys	Ala Val Ser	Glu Gly Cys
	325	330		335
Thr Leu Leu	Ser Gln Ala Leu	Arg Glu Arg	Ser Ser Pro	Arg Thr Leu
	340	345		350
Pro Pro Val	Asn Ser Asn	Ser Val Asn		
355		360		

<210> 3835

<211> 2366

<212> DNA

<213> Homo sapiens

<400> 3835

nacgcgttcg atatccgccc ggagctccgg cgcagctcct ccaccttgga gctcatgaga
 60
 gcaggccttg tggtagcag ggacggtgca ccggacggcg ggatcgagca aatgggtctg
 120
 gccatggagc acggagggtc ctacgctcgg gcggggggca gctctcgggg ctgctggtat
 180
 tacctgcgct acttcttctt cttcgtctcc ctcatccaat tcctcatcat cctggggctc
 240
 gtgctcttca tggcttatgg caacgtgcac gtgagcacag agtccaacct gcaggccacc
 300
 gagcgccgag ccgagggcct atacagtcag ctccatagggc tcacggcctc ccagtccaac
 360
 ttgaccaagg agctcaactt caccacccgc gccaaaggatg ccatcatgca gatgtggctg
 420
 aatgctcgcc gcgacctgga cgcgcatcaat gccagcttcc gccagtgccca gggtagccgg
 480
 gtcattctaca cgaacaatca gaggtacatg gctgccatca tcttgagtga gaagcaatgc
 540
 agagatcaat tcaaggacat gaacaagagc tgcgatgcct tgctcttcat gctgaatcag
 600
 aaggtgaaga cgctggagggt ggagatagcc aaggagaaga ccatttgac taaggataag
 660
 gaaagcgtgc tgctgaacaa acgcgtggcg gaggaacagc tggttgaatg cgtgaaaacc
 720
 cgggagctgc agcaccaaga gcgccagctg gccaaaggagc aactgcaaaa ggtgcaagcc
 780
 ctctgcctgc ccctggacaa ggacaagttt gagatggacc ttcgtaacct gtggagggac
 840
 tccattatcc cagcagcct ggacaacctg ggttacaacc tctaccatcc cctgggctcg
 900
 gaattggcct ccatccgcag agcctgcgac cacatgccca gcctcatgag ctccaagggtg
 960
 gaggagctgg cccggagcct cggggcgat atcgaacgcg tggcccgca gaactcagac
 1020
 ctccaacgcc agaagctgga agcccagcag ggctgcggg ccagtcagga ggcgaaacag
 1080
 aaggtggaga aggaggctca ggcccgggag gccaaagctcc aagctgaatg ctcccggcag
 1140

acccagctag cgctggagga gaaggcgggtg ctgcggaagg aacgagacaa cctggccaag
 1200
 gagctggaag agaagaagag ggaggcggag cagctcagga tggagctggc catcagaaac
 1260
 tcagccctgg acacctgcat caagaccaag tcgcagccga tgatgccagt gtcaaggccc
 1320
 atgggcccctg tccccaaacc ccagcccatc gacccagcta gcctggagga gttcaagagg
 1380
 aagatcctgg agtcccagag gccccctgca ggcacccctg tagcccatc cagtggctga
 1440
 ggaggtcca ggctgagga ccaagggatg gcccgactcg gcggtttgcg gaggatgcag
 1500
 ggatatgtc acagcgcccg acacaacccc ctcccgccgc cccaaccac ccagggccac
 1560
 catcagacaa ctccctgcat gcaaaccct agtaccctct cacaccgcga ccgcgcctc
 1620
 acgatccctc acccagagca caggccgcg gagatgacgt caccaagca acggcgctga
 1680
 cgtcacatat caccgtggtg atggcgtcac gtggccatgt agacgtcacg aagagatata
 1740
 gcgatggcgt cgtgcagatg cagcacgtcg cacacagaca tggggaactt ggcatgacgt
 1800
 cacaccgaga tgcagcaacg acgtcacggg ccatgtcgac gtcacacata ttaatgtcac
 1860
 acagacgcgg cgatggcatc acacagacgg tgatgatgtc acacacagac acagtgacaa
 1920
 cacacacat gacaacgaca cctatagata tggcaccaac atcacatgca cgcatgccct
 1980
 ttcacacaca ctttctaccc aattctcacc tagtgtcacg ttcccccgac cctggcacac
 2040
 gggccaaggt acccagagga tcccatcccc tcccgcacag ccctggggccc cagcacctcc
 2100
 cctcctccag ctctctggcc tcccagccac ttctcacc ccagtgcctg gaccggagg
 2160
 tgagaacagg aagccattca cctccgctcc ttgagcgtga gtgtttccag gacccctcg
 2220
 gggccctgag ccgggggtga gggtcacctg ttgtcgggag gggagccact ccttctcccc
 2280
 caactcccag ccctgcctgt ggcccgttga aatgttggtg gcacttaata aatattagta
 2340
 aatccttaaa aaaaaaaaaa aaaaaa
 2366

<210> 3836

<211> 479

<212> PRT

<213> Homo sapiens

<400> 3836

Xaa	Ala	Phe	Asp	Ile	Arg	Pro	Glu	Leu	Arg	Arg	Ser	Ser	Ser	Thr	Leu
1				5					10					15	
Glu	Leu	Met	Arg	Ala	Gly	Leu	Val	Val	Ser	Arg	Asp	Gly	Ala	Pro	Asp
			20						25				30		
Gly	Gly	Ile	Glu	Gln	Met	Gly	Leu	Ala	Met	Glu	His	Gly	Gly	Ser	Tyr

		35						40						45					
Ala	Arg	Ala	Gly	Gly	Ser	Ser	Arg	Gly	Cys	Trp	Tyr	Tyr	Leu	Arg	Tyr				
	50					55					60								
Phe	Phe	Leu	Phe	Val	Ser	Leu	Ile	Gln	Phe	Leu	Ile	Ile	Leu	Gly	Leu				
65					70					75					80				
Val	Leu	Phe	Met	Val	Tyr	Gly	Asn	Val	His	Val	Ser	Thr	Glu	Ser	Asn				
				85					90					95					
Leu	Gln	Ala	Thr	Glu	Arg	Arg	Ala	Glu	Gly	Leu	Tyr	Ser	Gln	Leu	Leu				
			100					105					110						
Gly	Leu	Thr	Ala	Ser	Gln	Ser	Asn	Leu	Thr	Lys	Glu	Leu	Asn	Phe	Thr				
		115					120					125							
Thr	Arg	Ala	Lys	Asp	Ala	Ile	Met	Gln	Met	Trp	Leu	Asn	Ala	Arg	Arg				
	130					135					140								
Asp	Leu	Asp	Arg	Ile	Asn	Ala	Ser	Phe	Arg	Gln	Cys	Gln	Gly	Asp	Arg				
145					150					155					160				
Val	Ile	Tyr	Thr	Asn	Asn	Gln	Arg	Tyr	Met	Ala	Ala	Ile	Ile	Leu	Ser				
				165					170					175					
Glu	Lys	Gln	Cys	Arg	Asp	Gln	Phe	Lys	Asp	Met	Asn	Lys	Ser	Cys	Asp				
			180					185				190							
Ala	Leu	Leu	Phe	Met	Leu	Asn	Gln	Lys	Val	Lys	Thr	Leu	Glu	Val	Glu				
		195					200					205							
Ile	Ala	Lys	Glu	Lys	Thr	Ile	Cys	Thr	Lys	Asp	Lys	Glu	Ser	Val	Leu				
	210					215					220								
Leu	Asn	Lys	Arg	Val	Ala	Glu	Glu	Leu	Val	Glu	Cys	Val	Lys	Thr					
225					230				235					240					
Arg	Glu	Leu	Gln	His	Gln	Glu	Arg	Gln	Leu	Ala	Lys	Glu	Gln	Leu	Gln				
				245					250					255					
Lys	Val	Gln	Ala	Leu	Cys	Leu	Pro	Leu	Asp	Lys	Asp	Lys	Phe	Glu	Met				
		260						265					270						
Asp	Leu	Arg	Asn	Leu	Trp	Arg	Asp	Ser	Ile	Ile	Pro	Arg	Ser	Leu	Asp				
		275					280					285							
Asn	Leu	Gly	Tyr	Asn	Leu	Tyr	His	Pro	Leu	Gly	Ser	Glu	Leu	Ala	Ser				
	290					295					300								
Ile	Arg	Arg	Ala	Cys	Asp	His	Met	Pro	Ser	Leu	Met	Ser	Ser	Lys	Val				
305					310					315				320					
Glu	Glu	Leu	Ala	Arg	Ser	Leu	Arg	Ala	Asp	Ile	Glu	Arg	Val	Ala	Arg				
				325					330					335					
Glu	Asn	Ser	Asp	Leu	Gln	Arg	Gln	Lys	Leu	Glu	Ala	Gln	Gln	Gly	Leu				
			340					345					350						
Arg	Ala	Ser	Gln	Glu	Ala	Lys	Gln	Lys	Val	Glu	Lys	Glu	Ala	Gln	Ala				
		355					360					365							
Arg	Glu	Ala	Lys	Leu	Gln	Ala	Glu	Cys	Ser	Arg	Gln	Thr	Gln	Leu	Ala				
	370					375					380								
Leu	Glu	Glu	Lys	Ala	Val	Leu	Arg	Lys	Glu	Arg	Asp	Asn	Leu	Ala	Lys				
3																			

465

470

475

<210> 3837

<211> 2084

<212> DNA

<213> Homo sapiens

<400> 3837

nagaggaggc ttttctctgg tgcttggcag atgcatgaag agactgatgg catgtggact
 60
 attcagaaaa ctgtggcaca ctgttgggtg caaggtgacc ttatgagatg ggctgacagt
 120
 ggggactgcc aactcatgtg tctgttttagc tcaccttttc ctgtgcccac cctccaaccc
 180
 cccaaccatg tgggaaggaa atgtttggcc ctctgaccct aactacatcc cacagactgg
 240
 gatggaaagg tgtctgagat taagaagaag atcaagtcca tcctgcctgg aaggtcctgt
 300
 gatctactgc aagacaccag ccacctgcct cccgagcact cggatgtggg gatcgtggga
 360
 ggtgggggtgc ttggcttgtc tgtggcctat tggctgaaga agctggagag cagacgaggt
 420
 gctattcgag tgctagtggg ggaacgggac cacacgtatt cacaggcctc caccgggctc
 480
 tcagtaggtg ggatttgta gcagttctca ttgcctgaga acatccagct ctccctcttt
 540
 tcagccagct ttctacgaa catcaatgag tacctggccg tagtcgatgc tcctccctg
 600
 gacctccggt tcaaccctc gggctacctc ttgctggcct cagaaaagga tgctgcagcc
 660
 atggagagca acgtgaaagt gcagaggcag gagggagcca aagtttctct gatgtctcct
 720
 gatcagcttc ggaacaagtt tcctgggata aacacagagg gagggtttt ggcgtcttat
 780
 gggatggagg acgaaggttg gtttgacccc tgggtgtctgc tccaggggct tggcgaaag
 840
 gtccagtcct tgggagtcct tttctgccag ggagaggtga cacgttttgt ctcttcatt
 900
 caacgcatgt tgaccacaga tgacaaagcg gtggtcttga aaaggatcca tgaagtccat
 960
 gtgaagatgg accgcagcct ggagtaccag cctgtggaat gcgccattgt gatcaacgca
 1020
 gccggagcct ggtctgcgca aatcgagca ctggctggtg ttggagaggg gccgcctggc
 1080
 accctgcagg gcaccaagct acctgtggag ccgaggaaaa ggtatgtgta tgtgtggcac
 1140
 tgccccagg gaccaggcct agagactccg cttgttgag acaccagtgg agcctatctt
 1200
 cgccgggaag gattaggtag caactaccta ggtggtcgta gcccactga gcaggaagaa
 1260
 ccggaccgga cgaacctgga agtggaccat gatttcttcc aggacaaggt gtggcccat
 1320
 ttggccctga gggccccagc ttttgagact ctgaagtgtt ttgtgcaccc gcaggttcag
 1380

agcgctggg ccggctatta cgactacaac acctttgacc agaatggcgt ggtgggcccc
 1440
 caccgcctag ttgtcaacat gtactttgct actggcttca gtggtcacgg gctccagcag
 1500
 gcccttgcca ttgggcgagc tgtagcagag atggtactga agggcaggtt ccagaccatc
 1560
 gacctgagcc ccttcctctt taccgcgttt tacttgggag agaagatcca ggagaacaac
 1620
 atcatctgag catgtgtgct ctgcactggc tccactggct tgcacacctg ctgtgttcac
 1680
 agccttggtt gctgcttcca tcttccccag tactgtgcca ggccttctcc ccctccccag
 1740
 tgtcctctcc tctcaggcag gccattgcac ccatatggct gggcaggcac aggcagtgag
 1800
 gccgaggcca atagcgagtg atgagcggga tcctaggact gatctgtagc ccatgctgat
 1860
 gtcacccacc agggcaatcc atctggaggc ctgagcaccc tggcccagga ctggcttcat
 1920
 cctggcactg accaggaaag actgcctctg accctcttag cagacagagc ccaggcatgg
 1980
 gagcactctg gggcagcctg gctcagggtt attgattttc gtctgtttac cctatccatt
 2040
 aatcaataca tgtaattaac tccttcaaaa aaaaaaaaaa aaaa
 2084

<210> 3838

<211> 468

<212> PRT

<213> Homo sapiens

<400> 3838

Leu	His	Pro	Thr	Asp	Trp	Asp	Gly	Lys	Val	Ser	Glu	Ile	Lys	Lys	Lys
1				5				10						15	
Ile	Lys	Ser	Ile	Leu	Pro	Gly	Arg	Ser	Cys	Asp	Leu	Leu	Gln	Asp	Thr
			20					25					30		
Ser	His	Leu	Pro	Pro	Glu	His	Ser	Asp	Val	Val	Ile	Val	Gly	Gly	Gly
		35					40					45			
Val	Leu	Gly	Leu	Ser	Val	Ala	Tyr	Trp	Leu	Lys	Lys	Leu	Glu	Ser	Arg
	50					55					60				
Arg	Gly	Ala	Ile	Arg	Val	Leu	Val	Val	Glu	Arg	Asp	His	Thr	Tyr	Ser
65					70					75					80
Gln	Ala	Ser	Thr	Gly	Leu	Ser	Val	Gly	Gly	Ile	Cys	Gln	Gln	Phe	Ser
				85					90					95	
Leu	Pro	Glu	Asn	Ile	Gln	Leu	Ser	Leu	Phe	Ser	Ala	Ser	Phe	Leu	Arg
			100					105					110		
Asn	Ile	Asn	Glu	Tyr	Leu	Ala	Val	Val	Asp	Ala	Pro	Pro	Leu	Asp	Leu
	115						120					125			
Arg	Phe	Asn	Pro	Ser	Gly	Tyr	Leu	Leu	Leu	Ala	Ser	Glu	Lys	Asp	Ala
	130					135					140				
Ala	Ala	Met	Glu	Ser	Asn	Val	Lys	Val	Gln	Arg	Gln	Glu	Gly	Ala	Lys
145					150					155					160
Val	Ser	Leu	Met	Ser	Pro	Asp	Gln	Leu	Arg	Asn	Lys	Phe	Pro	Trp	Ile
				165					170					175	
Asn	Thr	Glu	Gly	Val	Ala	Leu	Ala	Ser	Tyr	Gly	Met	Glu	Asp	Glu	Gly

180 185 190
 Trp Phe Asp Pro Trp Cys Leu Leu Gln Gly Leu Arg Arg Lys Val Gln
 195 200 205
 Ser Leu Gly Val Leu Phe Cys Gln Gly Glu Val Thr Arg Phe Val Ser
 210 215 220
 Ser Ser Gln Arg Met Leu Thr Thr Asp Asp Lys Ala Val Val Leu Lys
 225 230 235 240
 Arg Ile His Glu Val His Val Lys Met Asp Arg Ser Leu Glu Tyr Gln
 245 250 255
 Pro Val Glu Cys Ala Ile Val Ile Asn Ala Ala Gly Ala Trp Ser Ala
 260 265 270
 Gln Ile Ala Ala Leu Ala Gly Val Gly Glu Gly Pro Pro Gly Thr Leu
 275 280 285
 Gln Gly Thr Lys Leu Pro Val Glu Pro Arg Lys Arg Tyr Val Tyr Val
 290 295 300
 Trp His Cys Pro Gln Gly Pro Gly Leu Glu Thr Pro Leu Val Ala Asp
 305 310 315 320
 Thr Ser Gly Ala Tyr Phe Arg Arg Glu Gly Leu Gly Ser Asn Tyr Leu
 325 330 335
 Gly Gly Arg Ser Pro Thr Glu Gln Glu Glu Pro Asp Pro Ala Asn Leu
 340 345 350
 Glu Val Asp His Asp Phe Phe Gln Asp Lys Val Trp Pro His Leu Ala
 355 360 365
 Leu Arg Val Pro Ala Phe Glu Thr Leu Lys Cys Phe Val His Pro Gln
 370 375 380
 Val Gln Ser Ala Trp Ala Gly Tyr Tyr Asp Tyr Asn Thr Phe Asp Gln
 385 390 395 400
 Asn Gly Val Val Gly Pro His Pro Leu Val Val Asn Met Tyr Phe Ala
 405 410 415
 Thr Gly Phe Ser Gly His Gly Leu Gln Gln Ala Pro Gly Ile Gly Arg
 420 425 430
 Ala Val Ala Glu Met Val Leu Lys Gly Arg Phe Gln Thr Ile Asp Leu
 435 440 445
 Ser Pro Phe Leu Phe Thr Arg Phe Tyr Leu Gly Glu Lys Ile Gln Glu
 450 455 460
 Asn Asn Ile Ile
 465

<210> 3839

<211> 758

<212> DNA

<213> Homo sapiens

<400> 3839

nnacgcgtgc aggactctct ggaagtcacc cttcccagca aacaagagga ggaggatgag
 60
 gaggaggagg aggaggagaa agaccagcct gccgagatgg agtaccttaa ctctcgctgt
 120
 gtcctttttca cttattttcca gggagacatt gggtcagtag tggatgaaca cttctcaaga
 180
 gctttggggcc aagccatcac cctccatcca gaatctgcc tttcaaaaag caagatgggg
 240
 ctaaccccccc tatggcgaga cagctcagct ctctcaagcc agcggaatag tttcccaact
 300

tccttttggga ccagctctta ccagccccc cctgcacctt gtttgggggg agttcatcct
 360
 gacttccagg tcaactggacc ccctggcacc ttttctgcag ctgatccag tccttggccg
 420
 ggacacaacc tgcatacagac tggcccagcc cctccccctg ctgtgtctga gtccctggcct
 480
 tatcctttga catctcaggt gagcccatcc tacagccata tgcatacagc gtacatgcgg
 540
 caccaccacc ctcatgccc catgcaccac cgccaccgcc accatcatca ccatcaccac
 600
 cctcctgctg gctctgccct ggatccatcc tatgggcctc tgctgatgcc ttcagtgcac
 660
 gcggccagga ttcctgctcc ccagtgtgac atcacaaga cagaaccaac tacagtcacc
 720
 tctgctacct cagcatgggc tggagccttt catggaac
 758

<210> 3840

<211> 252

<212> PRT

<213> Homo sapiens

<400> 3840

Xaa	Arg	Val	Gln	Asp	Ser	Leu	Glu	Val	Thr	Leu	Pro	Ser	Lys	Gln	Glu
1			5					10					15		
Glu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Lys	Asp	Gln	Pro	Ala	Glu
		20					25					30			
Met	Glu	Tyr	Leu	Asn	Ser	Arg	Cys	Val	Leu	Phe	Thr	Tyr	Phe	Gln	Gly
	35					40					45				
Asp	Ile	Gly	Ser	Val	Val	Asp	Glu	His	Phe	Ser	Arg	Ala	Leu	Gly	Gln
	50				55				60						
Ala	Ile	Thr	Leu	His	Pro	Glu	Ser	Ala	Ile	Ser	Lys	Ser	Lys	Met	Gly
65				70				75						80	
Leu	Thr	Pro	Leu	Trp	Arg	Asp	Ser	Ser	Ala	Leu	Ser	Ser	Gln	Arg	Asn
			85					90					95		
Ser	Phe	Pro	Thr	Ser	Phe	Trp	Thr	Ser	Ser	Tyr	Gln	Pro	Pro	Pro	Ala
		100					105					110			
Pro	Cys	Leu	Gly	Gly	Val	His	Pro	Asp	Phe	Gln	Val	Thr	Gly	Pro	Pro
		115				120					125				
Gly	Thr	Phe	Ser	Ala	Ala	Asp	Pro	Ser	Pro	Trp	Pro	Gly	His	Asn	Leu
	130				135					140					
His	Gln	Thr	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Val	Ser	Glu	Ser	Trp	Pro
145				150					155					160	
Tyr	Pro	Leu	Thr	Ser	Gln	Val	Ser	Pro	Ser	Tyr	Ser	His	Met	His	Asp
			165					170				175			
Val	Tyr	Met	Arg	His	His	His	Pro	His	Ala	His	Met	His	His	Arg	His
		180					185				190				
Arg	His	His	His	His	His	His	Pro	Pro	Ala	Gly	Ser	Ala	Leu	Asp	
	195					200				205					
Pro	Ser	Tyr	Gly	Pro	Leu	Leu	Met	Pro	Ser	Val	His	Ala	Ala	Arg	Ile
	210				215					220					
Pro	Ala	Pro	Gln	Cys	Asp	Ile	Thr	Lys	Thr	Glu	Pro	Thr	Thr	Val	Thr
225				230					235					240	
Ser	Ala	Thr	Ser	Ala	Trp	Ala	Gly	Ala	Phe	His	Gly				

245

250

<210> 3841
 <211> 367
 <212> DNA
 <213> Homo sapiens

<400> 3841
 ctgggaactc cccacacttc cgtgggcaac atcttgggggt cattgatcgc tggctactgg
 60
 gtgtccacat gctggggcct gtcttttcgtc gtgcctggag ccacgtggc agccatgggg
 120
 atagtgtgct ttctcttcct cattgaacat ccgaacgacg tcaggtgctc ctccaccctg
 180
 gtgacgcact caaaaggcta tgagaatggg acaaacaggt tgagcctccc gaagccaatc
 240
 ttgaagagcg aaaagaacaa gcctctggac ccagagatgc agtgcttgct gctctcagat
 300
 gggaagggct ccacccaccc gaaccacgtc gtcattctcc ccggggacgg tgggagtggc
 360
 ccggccg
 367

<210> 3842
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 3842
 Leu Gly Thr Pro His Thr Ser Val Gly Asn Ile Leu Gly Ser Leu Ile
 1 5 10 15
 Ala Gly Tyr Trp Val Ser Thr Cys Trp Gly Leu Ser Phe Val Val Pro
 20 25 30
 Gly Ala Ile Val Ala Ala Met Gly Ile Val Cys Phe Leu Phe Leu Ile
 35 40 45
 Glu His Pro Asn Asp Val Arg Cys Ser Ser Thr Leu Val Thr His Ser
 50 55 60
 Lys Gly Tyr Glu Asn Gly Thr Asn Arg Leu Ser Leu Pro Lys Pro Ile
 65 70 75 80
 Leu Lys Ser Glu Lys Asn Lys Pro Leu Asp Pro Glu Met Gln Cys Leu
 85 90 95
 Leu Leu Ser Asp Gly Lys Gly Ser Ile His Pro Asn His Val Val Ile
 100 105 110
 Leu Pro Gly Asp Gly Gly Ser Gly Pro Ala
 115 120

<210> 3843
 <211> 712
 <212> DNA
 <213> Homo sapiens

<400> 3843
 ngctgtccgg ccgcagggc ggtcgaggtg ggaacggagc agccccgggg gcccccttga
 60

ggcggcgagg ccgcgaaggg cgcggggctg gaggcccgcg gcgccatggc tcacgtcggc
 120
 tcccgcgaagc gctcgaggag tgcagccgg tcccggggac gggggtcgga aaagagaaag
 180
 aagaagagca ggaaagacac ctcgaggaac tgctcggcct ccacatccca aggtcgcaag
 240
 gccagcacgg cccctggggc ggaggcctca cttctccct gcacacaga gagaagcaag
 300
 cagaaggccc ggaggagaac aagatccagc tcctcctcct cttctccag ttcttctagc
 360
 tcctcttctt cctcctcgtc ctcctcctct tcctccagt atggccggaa gaagcggggg
 420
 aagtacaagg acaagaggag gaagaagaag aagaagagga agaagctgaa gaagaagggc
 480
 aaggagaagg cggaagcaca gcaggcagag catcatccgc aaggtggtgg accctgagac
 540
 ggggcgcacc aggcttatta agggagatgg cgaggtccta gaggaaatcg taaccaaaga
 600
 acgacacaga gagatcaaca agcaagccac ccgaggggac tgcctggcct tccagatgcg
 660
 agctgggttg cttcctgagg gccccgctgg caaggctgtg gacgacgctg gc
 712

<210> 3844

<211> 143

<212> PRT

<213> Homo sapiens

<400> 3844

Met	Ala	His	Val	Gly	Ser	Arg	Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser
1				5					10					15	
Arg	Gly	Arg	Gly	Ser	Glu	Lys	Arg	Lys	Lys	Lys	Ser	Arg	Lys	Asp	Thr
			20					25					30		
Ser	Arg	Asn	Cys	Ser	Ala	Ser	Thr	Ser	Gln	Gly	Arg	Lys	Ala	Ser	Thr
		35					40					45			
Ala	Pro	Gly	Ala	Glu	Ala	Ser	Pro	Ser	Pro	Cys	Ile	Thr	Glu	Arg	Ser
	50					55				60					
Lys	Gln	Lys	Ala	Arg	Arg	Arg	Thr	Arg	Ser	Ser	Ser	Ser	Ser	Ser	Ser
65					70				75					80	
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
			85					90					95		
Ser	Ser	Asp	Gly	Arg	Lys	Lys	Arg	Gly	Lys	Tyr	Lys	Asp	Lys	Arg	Arg
		100						105					110		
Lys	Lys	Lys	Lys	Lys	Arg	Lys	Lys	Leu	Lys	Lys	Lys	Gly	Lys	Glu	Lys
	115					120						125			
Ala	Glu	Ala	Gln	Gln	Ala	Glu	His	His	Pro	Gln	Gly	Gly	Gly	Pro	
	130					135						140			

<210> 3845

<211> 2302

<212> DNA

<213> Homo sapiens

<400> 3845

nacgcgtgggt tctgctgggc cttggttttg gctacttggg tccgctgggc cccacagacc
60
agccccggcag tacctgctgt gccccggctc aagcgggggtg gagaacacgg agctcgtcaa
120
gtcaccaggt gagtacctga tgatgctgat gccaccagc caggaggagg agaaagacaa
180
gcctgtggcc cccagcaacg tcctgtcgat ggcccagctg cgcacgctgc ccctggccga
240
tcagatcaag atcctgatga agaattgtgaa ggtcatgcct ttgccaact tgatgagcct
300
cctgggcccc tccatcgatt ccgtggctgt tctgcggggc atccagaagg tggcgatgtt
360
ggtccaaggg aactgggtgg tgaagagtga catcctatac cccaaggact cgtccagccc
420
tcacagcggc gtgcctgctg aggtgctctg caggggccga gacttcgtta tgtggaagtt
480
cacgcagagc cgctgggtgg ttaggaaaga ggtggcaacc gtgacaaaac tctgcgccga
540
ggatgtgaag gacttcctgg agcacatggc cgtggtgagg atcaacaaag gctgggagtt
600
cattctgcct tatgatgggg agttcatcaa gaagcaccgc gatgtggtcc agcggcagca
660
catgctgtgg acgggtatcc aggccaaact ggaaaaagtc tataatcttg taaaggaaac
720
catgccaaag aagccgatg cacaatcagg gcctgccggg ctggtctgtg gggaccagcg
780
gatccaagta gccaaaacca aggccagca gaaccacgcg ttgctggagc gggagctgca
840
gcggcggaag gagcagctgc gggtgctgc ggtcccgccc ggtgtgcgga tcaaggagga
900
gcccgtgagc gaggagggcg agggagacga ggagcaggag gcggaggagg agcccatgga
960
cacttcccc agcggcctcc acagcaagct ggccaacggg ctgcctctcg ggcgggctgc
1020
gggcacagac agcttcaacg ggcacccgcc ccagggtgc gccagcacc ctgtggctcg
1080
ggaactgaag gccttcgtgg aggccacctt tcagagacag tttgtgctca cgctgagcga
1140
actcaagcgc ctcttcaatc tgcaattggc cagcctgccc cccggccaca cactcttcag
1200
cggcatctcg gaccgcatgc tacaggacac ggtgctggcc gccggttgca agcagatact
1260
ggtgcctttt cccccccaga ctgctgcttc cccggatgag cagaagggtg ttgccctctg
1320
ggagtctgga gacatgagtg atcagcatcg acaggttttg cttgaaattt tttccaaaaa
1380
ttaccgggta cgcgaaaca tgatccagtc tcggttgact caagagtgtg gagaagatct
1440
cagtaaacag gaggtggata aagtactaaa ggactgctgt gtaagctatg gtggcatgtg
1500
gtaccttaaa gggacagtac agtcttgaca atagtagcaa actactaacc cagcaaactt
1560
aagcccaagg aagaagggcg gaaccagaag tagggcctcg acttgcttca gacgacacag
1620

agcaagagga actgaccatc tcatgacctg tggcattgca cgggtgcagtg gacagaaggg
 1680
 attatcctca gccagtcgca gggtcagctt aagttagtta gatcactccc agaagagacc
 1740
 agctgggacc ttctttgcag tacaatttga aattcctgat gtattttgct tattatttgg
 1800
 tttcattctc ataataaaga gagtgtatac ttacatgggc aggatgataa aaatcatggg
 1860
 ttaatatattt cttttgtaaa cttaatgccca acaaggtcta agttatgttt acaacatgaa
 1920
 gaaaacctca aagttcttaa tttttaaaat gcctagaaga caatatttag tcttggatta
 1980
 tctatctgct aagacctcca ccaatttcat taaaccaa at tgaattattc tattcttggg
 2040
 attctgtggc cacttcacct ttgacaacaa cctactttat gtagcagtct caactgttta
 2100
 catgaaccat agcaaaaaaa tcagaatcaa atccatctcc ttttaatggt tgcagaaaga
 2160
 tgcaaacaaa accaggtaag tatggaacaa tgtgtaagtg aggttatcac actttgatgt
 2220
 aaaaatttct attttgtgta tttttaaaat aaatgcaa ac actaaactaa aaaaaaaaaa
 2280
 aaaaaaaaaa aaaaaaaaaa aa
 2302

<210> 3846

<211> 197

<212> PRT

<213> Homo sapiens

<400> 3846

Ser	Cys	Lys	Gly	Asn	His	Ala	Lys	Glu	Ala	Gly	Cys	Thr	Ile	Arg	Ala
1				5				10						15	
Cys	Arg	Ala	Gly	Leu	Trp	Gly	Pro	Ala	Asp	Pro	Ser	Ser	Gln	Asn	Gln
			20					25					30		
Gly	Pro	Ala	Glu	Pro	Arg	Val	Ala	Gly	Ala	Gly	Ala	Ala	Ala	Ala	Glu
		35					40					45			
Gly	Ala	Ala	Ala	Gly	Ala	Cys	Gly	Pro	Ala	Arg	Cys	Ala	Asp	Gln	Gly
	50					55					60				
Gly	Ala	Arg	Glu	Arg	Gly	Gly	Arg	Gly	Gly	Arg	Gly	Ala	Gly	Gly	Gly
65				70						75				80	
Gly	Gly	Ala	His	Gly	His	Phe	Pro	Gln	Arg	Pro	Pro	Gln	Gln	Ala	Gly
			85					90						95	
Gln	Arg	Ala	Ala	Ser	Arg	Ala	Gly	Cys	Gly	His	Arg	Gln	Leu	Gln	Arg
			100					105					110		
Ala	Pro	Ala	Pro	Gly	Leu	Arg	Gln	His	Pro	Cys	Gly	Ser	Gly	Thr	Glu
		115					120					125			
Gly	Leu	Arg	Gly	Gly	His	Leu	Ser	Glu	Thr	Val	Cys	Ala	His	Ala	Glu
	130					135					140				
Arg	Thr	Gln	Ala	Pro	Leu	Gln	Ser	Ala	Leu	Gly	Gln	Pro	Ala	Pro	Arg
145					150					155				160	
Pro	His	Thr	Leu	Gln	Arg	His	Leu	Gly	Pro	His	Ala	Thr	Gly	His	Gly
			165					170					175		
Ala	Gly	Arg	Arg	Leu	Gln	Ala	Asp	Thr	Gly	Ala	Phe	Ser	Pro	Pro	Asp

180
Cys Cys Phe Pro Gly
195

185

190

<210> 3847

<211> 1570

<212> DNA

<213> Homo sapiens

<400> 3847

```

nnccatgggtg ggcttgaggg tggggctgtc ctagagcatt aaacagctgt tgggccctgg
60
gctgaccccc ccacctgca tgtgtggggg tccccacagc tcttatgttc ctcttggggc
120
ttctggaatt cctcctcctt aggcaagcct atcacagcat cctgaccctg ggggcctctg
180
tgcagctggt gtttggtttt gaggtaaaac tggcttggga ggttgagagg acaagcccga
240
ggtgacccca catgtgcctt gaataaccca acagaccctt cctcagcacc tgctatgtgg
300
ccaacctgtg ctggccacca aggggcagtg atcagatatg gctcctgccc tccacacgct
360
cactcctagg tgactgggga gacgcacaaa gaggctagga cagaggagga gccccaacct
420
ggggctcagg agagggttcc tggaggctcg tgccggagct agctggtaat ggacaggaga
480
ggattagttc catggacaac tggaggcgtg tccctggcag agagagaatg tgttcagtga
540
cgacagctca tatttggtga gtgcgaattt cacaccaggc cctatgctga gctcctgacc
600
tgcattctctt attcagcaag acaatactgt tataaaggaa cagttaatta tgtcatttta
660
tagataagta aactgaggtt cactgagttg ccaaaagtca cagctagtaa gtggaggggc
720
taggaggacc ctgggtgtgt ctagagcctg tgattgtacc actgcacctg ctgtgcagag
780
gccttgggga gcaatgtggg tgcagcaagg gggagctatg tgtttacatc cccctcgctc
840
ccctctccct tcagtatgcc atcctgatga cgatgggtgt caccatcttc atcaagtatg
900
tgctgcactc cgtggacctc cagagtgaga acccctggga caacaaggct gtgtacatgc
960
tctacacaga gctgtttaca ggtgagaggg gcctgggcct ctcttgatct ggaccagcat
1020
cctccactct gcctcctggc cctgtgacct gctgctttct gcatccctc cctcaggct
1080
tcatcaaggc tctgctgtac atggccttca tgaccatcat gatcaagggt cacaccttcc
1140
cactctttgc catccggccc atgtacctgg ccatgaggtg agcccggccc tgtccccga
1200
tcctcctgac ctgatccctg ccttctcctt gctttcactg actgtccttt cagacagttc
1260
aagaaagctg tgacagatgc catcatgtct cgccgagcca tccgcaacat gaacacctg
1320

```

tatccagatg ccaccccaga ggagctccag gcaatggaca atgtctgcat catctgccga
 1380
 gaagagatgg tgactggtgc caagagactg ccttgaacc acattttcca taccaggtgg
 1440
 gaggggccct ggggagcctg cccagcaggg cccaggcccc agaaggcagg ccctaagggg
 1500
 cctgctgacc tctgctggc cttgaccgc agctgctgc gctcctggtt ccagcggcag
 1560
 cagacctgcc
 1570

<210> 3848

<211> 120

<212> PRT

<213> Homo sapiens

<400> 3848

Pro	Asp	Pro	Val	Pro	Ser	Pro	Ala	Phe	Thr	Asp	Cys	Pro	Phe	Arg	Gln
1				5					10					15	
Phe	Lys	Lys	Ala	Val	Thr	Asp	Ala	Ile	Met	Ser	Arg	Arg	Ala	Ile	Arg
			20					25					30		
Asn	Met	Asn	Thr	Leu	Tyr	Pro	Asp	Ala	Thr	Pro	Glu	Glu	Leu	Gln	Ala
		35					40					45			
Met	Asp	Asn	Val	Cys	Ile	Ile	Cys	Arg	Glu	Glu	Met	Val	Thr	Gly	Ala
		50				55					60				
Lys	Arg	Leu	Pro	Cys	Asn	His	Ile	Phe	His	Thr	Arg	Trp	Glu	Gly	Pro
65					70				75					80	
Trp	Gly	Ala	Cys	Pro	Ala	Gly	Pro	Arg	Pro	Gln	Lys	Ala	Gly	Pro	Lys
			85					90					95		
Gly	Pro	Ala	Asp	Leu	Cys	Leu	Ala	Leu	Thr	Arg	Ser	Cys	Leu	Arg	Ser
			100					105					110		
Trp	Phe	Gln	Arg	Gln	Gln	Thr	Cys								
			115				120								

<210> 3849

<211> 1139

<212> DNA

<213> Homo sapiens

<400> 3849

cctgccgagg gccaggaatg agattaagga cggaacgcat gccctccaaa aagtggcatt
 60
 ttagaattta tacagcacc cagcacgctg ctaaactgtg gcacacaacc accacggccc
 120
 gatcacgcgc agcgggaacc cggctctctga gtccgccccg tgcgttgctg catcagagtc
 180
 acgccaccta atccattctc tcggtcttcg tctgctccgg tattgcaact gcctcgattg
 240
 gtcgatcctg ggccagcatg gcggcgccca tgtaaccggg tccgtgccgc aaagcgaacg
 300
 gcggccgcgg cgcgggcccc gcgggggtta gaggtcacca tgctgagggt cgctggaggg
 360
 acgctgagtt tgattcggac ccgggcagtt acccaggtcc tagtaccggg gctgccgggc
 420